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AN ESSAY  
ON THE  
REMITTENT AND INTERMITTENT DISEASES,  
INCLUDING, GENERICALLY  
**MARSH FEVER AND NEURALGIA.**  
COMPRISING, UNDER THE FORMER,  
VARIOUS ANOMALIES, OBSCURITIES, AND CONSEQUENCES,  
AND, UNDER A  
NEW SYSTEMATIC VIEW OF THE LATTER,  
TREATING OF  
**TIC DOULOUREUX, SCIATICA, HEADACH,**  
**OPHTHALMIA, TOOTHACH, PALSY,**  
AND  
MANY OTHER MODES AND CONSEQUENCES  
OF THIS  
*GENERIC DISEASE.*

---

BY JOHN MACCULLOCH, M.D., F.R.S., &c. &c.,  
PHYSICIAN IN ORDINARY TO HIS ROYAL HIGHNESS PRINCE  
LEOPOLD OF SAXE COBOURG.

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## CONTENTS TO VOLUME II.

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### CHAPTER I.

	<i>page</i>
<i>On Neuralgia in General</i> - - - - -	1

### CHAPTER II.

<i>On the Neuralgia of the Face, or the Tic Douloureux</i>	7
--	---

### CHAPTER III.

<i>On the Periodical Headach, and on Vertigo</i> - - -	29
--	----

### CHAPTER IV.

<i>On the Neuralgiæ of other Nerves in various Parts of the Body</i> - - - - -	70
--	----

### CHAPTER V.

<i>On Sciatica</i> - - - - -	107
------------------------------	-----

### CHAPTER VI.

<i>On Questionable Neuralgiæ</i> - - - - -	126
--	-----

### CHAPTER VII.

<i>On Neuralgic Affections of the Glands</i> - - -	141
--	-----

### CHAPTER VIII.

<i>On Neuralgia from Injuries of Nerves</i> - - -	151
---	-----

## CHAPTER IX.

	<i>page</i>
<i>On Toothach</i> - - - - -	169

## CHAPTER X.

<i>On the Rheumatism of the Eye: or the Neuralgic Ophthalmia</i> - - - - -	249
--	-----

## CHAPTER XI.

<i>General Remarks on the Connection between Neuralgia and Intermittent</i> - - - - -	321
---	-----

## CHAPTER XII.

<i>On certain Consequences of Intermittent or Marsh Fever and Neuralgia</i> - - - - -	338
---	-----

## CHAPTER XIII.

<i>On the Cure of Neuralgia in general</i> - - - - -	365
--	-----

## CHAPTER XIV.

<i>Conjectures respecting the Condition of the Nerves and Nervous System in the Intermittent and Neuralgic Diseases</i> - - - - -	431
---	-----

<i>Tabular View of the Diseases appertaining to Marsh Fever and Neuralgia</i> - - - - -	498
---	-----



## CHAPTER I.

### *Of Neuralgia in General.*

IF I have already stated in the introduction to this essay, the great number of years which have passed since I considered Neuralgia under its best-known form of Tic Douloureux, as a mode or variety of intermittent, and if I have taken every opportunity in my power, short of a formal treatise, to make that opinion known, that it might be effectually investigated, the progress which it has made is so limited, and the conviction as yet so narrow and so imperfect, if indeed it can be said to exist at all, that it will here be necessary to give the grounds on which it was formed, in some detail. Should others have adopted the same opinion independently, though at present unknown to me, I shall be pleased to think that my own is thus confirmed: but that this is not a view generally entertained, is plain from that practice, the division of the nerve, still resorted to for the cure of other Neuralgiæ as well as the Tic, or, if abandoned, not renounced from a juster theory of the disorder,

but from experience of its inefficiency. And this is not less proved, from the vacillations and the variety of the practice, among which I may include that of administering narcotics, lately in high repute, and from the nature of the treatises on this subject which have appeared: while if tonics, and particularly iron, have lately been introduced, they are not only of very recent date, unless in solitary and experimental instances, but are given, rather empirically than from any just theory of this disorder, or from any view of its connection with intermittent fever.

If in enumerating the anomalous forms of intermittent, in the preceding part of this essay, I have had to encounter the hazard of criticism from arranging under it diseases not generally supposed to belong to that leading one, I have been in some measure borne out by former authors; though in doing this, I have sometimes placed there a disease which I should have preferred classing in the present division. Hence, in this one, there will be a deficiency arising from that cause: but it will be a small evil to be thus deficient, when I foresee what will happen from the attempt to rank under Neuralgia what I have actually done; diseases which no one has yet considered as belonging to it, and for which I cannot refer to the authorities and opinions

which supported me in the former case. I must, in fact, consent to contend my way nearly through the whole, against inveterate habit and against prejudices; probably, often against pride not less inveterate: a disagreeable situation, since it demands evidence and arguments that might otherwise have been spared, while these are viewed with a jealous eye, or at least make that impression which arguments, and even evidence, ever do against prejudice, namely, nothing; and since it inevitably leads to a controversial tone of writing, as new opinions cannot be stated without contending with those to which they are opposed, nor even direct arguments produced without a critical investigation of former and contrary ones.

If I were now, at this stage, to give a list of the disorders which I propose to rank under Neuralgia, or, as is the truth, under Intermittent, it would doubtless be the correct and logical mode of commencing the subject. It would be that which a scientific investigation ought to adopt; as the proofs would then also be arranged in such a manner as to establish all the facts in the briefest and most regular method. Thus might the preceding part of this essay, as well as the present, be reduced to a smaller space, and thus also

would the two have been amalgamated under one general arrangement of species under a genus, or varieties under a species. But, to follow this course would be to commence by attacking, without preparation, a host of prejudices; to attempt to convince him whom we have begun, perhaps, by angering. This is not good policy; and though the proceeding be logical, it is not a logic which gains its ends. Therefore have I determined to sacrifice science and brevity to convenience; and by a gradual developement of the subject, conforming as much as possible to previous opinions, to allow the evidence to come forward in the mode in which it is least likely to meet with opposition, or to shock those to whom the subject is new. Such an explanation was due to a certain class of my readers, as well as to myself; as those to whom I allude will admit without hesitation.

I must yet demand permission to make another explanation, in defence of a want of order and of correctness of division, which, in the present stage of this inquiry, and in the first general treatise on this subject, was not to be avoided, however easy to regulate when once the views which it proposes shall have been admitted. If it is similar to one I made before, it is even more necessary here.

In the disorders which I am about to enumerate, some have been considered as independent diseases, arising from very different causes, while, of these, there are a few which have even established an independent character almost as ancient as physic itself.

Others have been viewed as symptoms of some disorder, but not of this one; while others again have been considered as trivial, or else inexplicable; mysterious cases occurring once in an age, and out of the common rules of physic: while, still farther, a few have been viewed as the produce of external injury; mechanical solutions of continuity or derangements of structure. Under such a confusion of names and opinions, I had no resource but to form an entire new arrangement, by creating apparently-new diseases and forming new terms, or else to abolish old and received diseases with their names, treating them as varieties, or lastly, as least presuming, to treat as Neuralgiæ, under their old names, those varieties which were already named, and to suffer the others to remain as nameless as they have hitherto been. And this plan, as the least offensive, I have adopted; while the inevitable consequence of it is a total want of philosophical arrangement, which, in any other science than



physic, I should have been ashamed to countenance.

In pursuance of this plan, I shall now therefore commence with the Neuralgia of the face, or, as it was once exclusively viewed, of the superior maxillary nerve, commonly known by the name of *Tic douloureux*: since this is the variety which has attracted most attention, which, not very long ago, was the only one supposed to exist, and which, if not the most common, has at least been the most discussed; while, if I mistake not, it is the one which has especially served to mislead and blind physicians respecting the true nature and theory of the whole of the disorders of the nerves connected with intermittent.

However repugnant to my own views of order, I shall also reserve the proofs which I propose to offer respecting the real nature and connections of all these diseases, to a late period of this inquiry; because I shall thus at least pave a way for their reception in the minds of those who might here have been startled at any such attempt to change their established and long-cherished opinions. I trust indeed that very little in the shape of formal proof will be required, after the diseases themselves have been described; as the facts will most generally carry their own evidence with them.

## CHAPTER II.

### *Of the Neuralgia of the Face; or the Tic Douloureux.*

I CANNOT exactly trace the period at which this disorder first began to attract attention in this country, under its present French name; but it is not a very distant one, while, as far as I can now find, there was nothing written respecting it before the notices of Heberden and Fothergill. As far also as I can discover, although the disease is described under various names, by nosologists, according to its several varieties as here brought under review, the term Tic douloureux seems to have originated about the year 1756, with André, hereafter mentioned as the surgeon who had also first recommended the division of the nerve. The public at large very naturally considered it, when first thus marked out, as a new disease, and still views it as a rare one. But it is neither new nor rare: it is the term alone that is new, while the apparent rarity is the result of two causes. To be noticed as a case of this disease, the pain must be excessive, and must

also be limited to a peculiar part of the face; and further, it must be found in the opulent, or in those who, little accustomed or willing to bear pain, fly to physic for relief, and thus call attention to themselves and their cases. There are thousands who suffer from it, under forms less marked; and thousands, in the middling and lower classes, who endure it, even in its worst form, but of whom the public never hears. He who will thus seek it out, will soon be convinced of the truth of this assertion, as I have long since been: and though he may find a much greater number of the cases not decidedly marked by the strongest and most peculiar features of this disorder, and therefore not known by this new popular term, he will be singularly unfortunate if he does not also meet many, of the best defined and most intense character, generally endured as best they may, and seldom forming objects of attention to the great mass of practitioners. If in a single and not very extensive tract in this country, I have produced, among the labouring classes, not less than a hundred cases in the course of a very brief investigation, it would be very extraordinary should others, with the same care, not meet similar success. Thus also a late observer finds now that it is

very common in India and Persia: while, if a suspicion is thus excited that it is in those climates connected with the Malaria, or the remittent, as I have ascertained it to be in the West Indies, there are unfortunately no details, as usual, by which this could be justified: such are the vexatious consequences which follow from the want of a correct theory.

It is natural to ask how this disorder was designated before the present popular term was introduced, or the more scientific one, Neuralgia, applied to it. It may not be very easy to answer this question satisfactorily; but the term rheumatism of the face appears to have been, as it is even now, the most common name under which it was known. Thus also has it often been attributed to disease in the *antrum maxillare*; an error still daily committed: while, in other cases, and under modifications, it has been called periodical headach, *clavus hystericus*, and toothach; and, if I mistake not, has not unfrequently also been attributed to gout; an error, even now sometimes committed. Under how many more excuses for ignorance it may have been described or named, it would be difficult to discover, without more inquiry than the question is worth; but it is easy to perceive that it has

often been set down as one of those rare and mysterious diseases of which physic can give no account, while by thus sheltering itself, it too often finds excuses for ignorance and carelessness. And we shall commit no injustice if we attribute a large portion of this confusion or error to the nosologists: not to quote all of whom, however, I may merely notice the confusion of Sauvages on this subject; when, ranking it, not very improperly indeed, among his *maladies convulsives*, under spasms, he associates it with many other irrelative disorders besides *trismus*.

If the introduction of the term Tic douloureux has had the effect of rendering this disorder far more noticed than it had been, and has thus appeared to careless reasoners to multiply the cases themselves, it seems to me to have been attended by the countervailing disadvantage of checking the progress of investigation into its real nature. If it is too generally the effect of terms to become the substitutes for ideas, this is peculiarly true of physic; if indeed I do not here commit a great injustice in appearing to forget that such, or little better, has been the reputed science of Metaphysics, not merely in the hands of Kant, but almost even from Aristotle to our own days. And if this is, at least far too much, the cha-



racter of physic itself, so is it most especially true of the mass of practitioners; to whom it is that art, that mere trade, which it ever must be, and who, possessed of the name of a disease and of the opposed names of the medicines with which it is to be fought, concern themselves no further than in applying the correlative hostile draughts in the quality and number that have been established. To this class, to the vast majority, a name is invaluable; for, deprived of it, they are helpless; and thus, while a term is their sole guide and rule of conduct, in that term are all their reasoning and all their philosophy centered.

And if, in the term *Tic douloureux*, there was no analogy implicated, nothing which could guide an even somewhat superior class of practitioners to reason respecting the probable nature and connections of this disorder, the original limitation of that name to the most painful form of Neuralgia, and to that when occupying one particular nerve or spot, added to the singular severity of the disease thus partially designated, served in some degree to keep out of sight all its modified forms, whether as to situation or severity; and thus to entail a continued blindness on all those who, unable to reason without terms, unaccustomed to inquire about

things, or unpractised in philosophical investigations or analogies, were incapable of seeing when deprived of their customary guides. The mere substitution of the term Neuralgia has here been of great use; by pointing out the road to a generalization, of which physicians have nevertheless been most tardy in taking advantage, as I trust to prove before long.

If I could point out many other reasons which seem to have acted in blinding physicians as to the true nature of this disease, I am unwilling to prolong remarks that cannot be made without implying censure: but there is one which I cannot pass over, because, while it is a fact of principal importance as concerns the cure of this disorder, it is one which has most obviously tended to maintain the popular ignorance, as well indeed as the general ignorance of practitioners themselves, respecting its nature; as it is one of the strongest proofs of that, and a bitter one indeed to those who have suffered from it. If I were to say that those who are accustomed more to the use of the knife, or to mechanical operations, for the cure of diseases, than to medicine, are too apt to view physic rather as a mechanical art than a philosophical science, and too ready, almost in a literal sense, to cut the knot

which a better reasoner would attempt to untie, I should perhaps be thought desirous of retorting a censure which the operating branch of this profession has, for some time past, with no very good taste and as little liberality, bestowed on physicians: from that spirit of rivalry in trade, apparently, which is the disgrace of this science, if not of others, in our own country. But if I desire to avoid an illiberality of comparison which cannot fail to be injurious to those from whom it proceeds as to those to whom it is applied, (while having, during many years of military service, divided my own time equally between both branches, and having consequently been taught to esteem both, I cannot feel as a partizan on either side,) it is to the practice of dividing the affected nerve, or to the inconsiderate and misplaced use of the knife, and therefore to surgeons and surgery, that we must very principally attribute that persistence in error respecting this disease which is yet far from overcome: while the fact of thus viewing it as a merely local disorder of a nerve, unconnected with any general disease of the system, speaking little as it does for the observation and reasoning powers of those who adopted and persisted in this error, appears to have acted in checking the

investigation that might otherwise have been made into the analogous diseases, by cutting through, almost literally, with the nerve itself, the very chain of analogical reasoning.

But enough of remarks which were however, unavoidable: and having thus said all that appeared necessary respecting the term Tic douloureux, I shall in future avoid it as much as possible: wishing, for reasons now obvious, that it could be extinguished from the vocabulary of physic. The word Neuralgia has the advantage of being general; and it is one which even the people will find more manageable by their organs than that which they so invariably mutilate.

Anatomists, with a refinement which is made a matter of much exclusive boast, and of not a little vulgar wonder, have undertaken to name the precise ramifications of the precise branches of the precise "pairs of nerves" in which the Neuralgia of the face must exist; and this petty pride has perhaps not had a small share also, in maintaining the ordinary false views of the nature of the disease. It may occur in any part of any nerve of the face; though thus reputed to occur chiefly or solely in the second branch of the fifth pair, and in the *portio dura* of the seventh: and I am almost inclined to blame myself that I should

even submit to distinguish these particular seats of the pain from others, since the disease is the same wherever it happens. And not only is this most violent and decided form of it found in various parts of the face, but, indifferently, in the head also; since in one of the best marked cases of it that I have witnessed, and where the pain was so excessive as to bring on delirium, it occupied a small point near the insertion of the occipital muscles.

I need scarcely say, that, in this disorder, as it stands in the popular acceptation, the pain is most severe; being probably as great, often, as the nervous system can endure: since all the surrounding objects sometimes disappear before its violence, or it deprives the patient of all other sensations; in vulgar language, of all his senses; frequently also inducing absolute delirium, as I just noticed; an effect rarely occurring from any other pure pain than the inflammation in the bowels. This extremity of pain is commonly instantaneous in its attack; resembling very much, in this respect, the electrical shock; and most generally it is similarly transitory, coming on in repeated fits during the continuance of the entire paroxysm. It is not, at the same time, always the sole pain; since a ge-



neral painful state exists through the whole paroxysm ; sufficiently severe, should it be the only one, as it often is, but appearing almost pleasure, when contrasted with the more acute shocks of the nerve.

During this state, the integuments, or rather the whole surrounding parts, become extremely irritable, or tender to the touch ; and commonly more so to a gentle contact than to firm pressure, which, on the contrary, sometimes removes that consequence, diminishing the moderate pain of the nerve also : and it is often apparent that there is a general increase of vascular action in the neighbouring parts, or a species of temporary inflammation, very similar to that of rheumatism ; an analogy of some value in the history of this disorder. As the pain ceases, this general soreness becomes commonly more sensible, remaining, often, for some time after that has disappeared ; when the whole vanishes together, leaving the patient in his usual health, or rather, most frequently in a state of debility and exhaustion.

To this general description, which I might have made much more striking, even without exaggeration, I need only add, that when the fit is impending, it is often brought on by any mo-

tion of the parts, such as, by the act of eating; as, during the course of the paroxysm, the same causes often re-excite the acute pain when comparatively dormant.

Such is a simple and ordinary case of a paroxysm of this Neuralgia; but many accessory circumstances of an equally obvious nature sometimes attend it. Thus, the neighbouring muscles, and even the more distant ones of the limbs, are often affected with spasms, occasionally to a considerable extent: while, not unfrequently, with the usual charity of the healthy, they are attributed to impatience and debility of mind on the part of the patient; as is more especially and certainly the case when these spasms seize on the larynx, producing involuntary cries, or converting the ordinary breathing into audible sounds. In truth, no one is entitled to assume the office of critic on a Neuralgic patient, who has not been a patient himself; and, for the cause of charity, it were perhaps to be wished that the disorder were more common, or that a short apprenticeship at least to it, were a more general lot.

Frequently also, there is an increased flow of saliva, and, much more often, of tears, which, in some cases, almost stream from the eyes; scarcely noticed by the patient, but not so by the by-

standers, always ready to attribute to mental weakness, what, in this case, is a mere increase of secretion from disordered excitement of the glandular nerves; forming, in fact, a peculiar variety or modification of Neuralgia which I shall have occasion hereafter to point out more distinctly. And if it is an episodical remark, I know not where better I can introduce it than here; that in patients who have suffered severely from Neuralgia under any of its forms, if the lacrymal glands have once been materially affected by the disease, they rarely recover their healthy state: and thus, that tears continue to be, not only easily excited in those who scarcely knew, before that, what it was to shed one, but that they frequently occur, and even in streams, without any mental cause at all, and not uncommonly in sleep, though no dreams are present, or at the hour of awaking; often lasting a considerable time, and producing no small inconvenience.

Lastly, among the more obvious accompanying symptoms of a paroxysm of this Neuralgia, it sometimes happens that other and distant nerves become also excited to pain. Where anatomy easily traces the connection, this is scarcely matter of surprise; and I shall hereafter show that such cases are not uncommon. Where there is no

such continuous connection, we must, I presume, suppose that the diseased condition exists in more places than one; unless any person is desirous to explain this by the very luminous term sympathy. I need not accumulate examples; as it will be easy to conjecture what may happen of this nature, from one case, within my knowledge, in which, after the pain in the face became established, there came on a similar one in each thumb and each great toe, continuing, but with less severity than the primary pain, during the paroxysm.

Now if such is the obvious character of a paroxysm of this Neuralgia, the most popular variety, or rather that to which, almost alone, the name has, generally, and till very lately, been given, there is more, less obvious, which it is the business of the physician to notice, and which, had it been duly noticed and reasoned on, should long since have explained the true nature of the disease.

Immediately before the attack, if the pulse is examined, it will be found to put on that character which it possesses in the cold stage of an intermittent; while, through the progress of the paroxysm, it passes through the other analogous changes. If also a watchful patient, at least

when directed to do so by his physician, (which I fear has rarely been the case,) attends to his previous feelings, he will find that there are most commonly some indications of a cold stage, generally obscure, it is true, as is the case in most of the anomalous and chronic intermittents, but still discernible: while doubtless it may sometimes be wanting or difficult to make out, as is so often the case in such obscure intermittents. When most distinct, it is like the sensation of cold water applied to some part of the face, or trickling over it, being indeed often thus described by patients; or there may sometimes be a sensation of cold, more general, if also transitory. The skin, at least of the face, also becomes pale and shrunk, with that peculiar physiognomy attending ague, so indicative of all these diseases, if so perpetually overlooked: and this is a symptom which, if unnoticed by the patient, ought never to escape the eye of an observing physician, explanatory, and often useful as it is. Occasionally, this paleness is local instead of general; and I have seen cases where I could pronounce that the paroxysm was threatening, from one side of the face turning suddenly white while the other retained its natural aspect and colour.

If this is the cold stage of this particular intermittent disease, the fit of pain appears to belong to the hot one, or thus at least has it always seemed in my experience: and if, as a hot stage, it is not a very marked febrile state, it is sometimes sufficiently apparent, in an increase of heat, local if not general, in the change of the pulse, and in a thirst which occasionally accompanies it. And if it is a slightly-marked hot fit, it is not slighter than that which often occurs in chronic intermittent when other kinds of local symptoms are present, or even when the cases are pure; while in such cases, as well as in this and other Neuralgiæ, the sweating stage is rarely well marked, or is perhaps only discovered by the facility with which that effect is produced by exertion.

Thus I have described a paroxysm of Neuralgia as resembling that of an obscure or chronic intermittent, with the superaddition of its peculiar pain or local affection of a nerve; and it remains to see what resemblance the general course of the disease bears to the common or simple intermittent, or rather, since I am not yet formally discussing the proofs of identity, what are the remaining characters of this disease.

It may be considered that there are two forms

of this, as of other Neuralgiæ, the acute and the chronic; or the disease may be new, or habitual; a distinction which it is important to make, because the latter is, like all intermittents, far less regular than the former, while being perhaps more observed, it has aided in misleading physicians respecting the true nature of Neuralgia.

In the recent state, or in the first case, it returns in distinct and defined paroxysms, occupying a certain number of hours, or even, in some instances, but a few minutes, and leaving an interval of health. Where I have had the best opportunities of observing it, the returns are daily, or the type quotidian, while they maintain a regularity of period similar to that of common intermittent, and subject also to the same variations as to time. If I have also met with tertian, and even with quartan periods, they have been, in my own experience, more rare: nor, in these cases, has the disease been so apparently regular, though I have little doubt that the practice of others will here supply my deficiencies.

Now when the disease is of long standing, or of a chronic character, it is less distinguished by this regularity, and, further, as far as I have had opportunities of seeing it, is even more uncertain than the analogies, in common or anomalous in-

termittent, with which it is best compared ; with the single exception, as far as I have seen, of the affection of the heart. Whatever may be the causes of this irregularity, if it is not the only fact which has aided in misleading physicians respecting the true nature of this disease, it is one which will probably cause many to suspend their judgments upon it at present, or to deny altogether the theory which I have here adopted. As an instance of these cases, I may quote one from Sauvages, where had it not been so durable, and not watched by an attentive physician, no regularity would have been perhaps suspected. In this, the pain occurred but once in eight days, yet never failing, and lasting thirty hours ; while, being in the temporal muscle, it is called by Sallius the *Hemicrania lunatica*. The entire duration extended to three years and a half.

I know not that I am able to explain why it should appear to be peculiarly irregular when compared to other chronic intermittents ; yet if I fail, here or any where else, in elucidating difficulties, I must attribute it to a very narrow experience, arising from circumstances not worth detailing, and which I have vainly attempted to atone for by increased attention, finding little assistance from personal communication or printed



records ; so unsatisfactory are all these, from the fundamental deficiency of a system of observation founded on true views of the nature of these disorders.

As the matter stands, however, the first cause of obscurity must be sought in the rarity of the highly-marked cases and rigidly-local affections of this nature, which have secured for themselves the name of Tic douloureux. There is consequently a small number of cases from which to form an average and a judgment ; whereas, were I to judge from all the cases of similar disorders, differing in violence and differing in place, which I intend here to rank under the same disease, I should decide that in the mass of neuralgic cases, the regularity was fully as great, under any type, as in the most acknowledged chronic intermittents.

Another ground of erroneous judgment as to this question, and which indeed I ought to have named first, has been the want of a correct original theory of the disorder ; a want which, in science universally, is the parent of erroneous and deficient observation. In the ague, of whatever type, the most vulgar know the theory of this disease, and thus mark its regularity ; while in this, where it is not known or expected, it is

not noted, either by patient or physician: and accordingly, I have, in numerous cases, ascertained that a Neuralgia, before supposed uncertain, or never attended to, was found to be perfectly regular, as soon as either the patient or the physician had been informed that such was the character of the disorder. And it must be noted here also, that while a daily attendance on the part of the physician will scarcely happen in many cases, even among the opulent, while, with the lower classes, that is likely to be very casual, it is abundantly easy to conceive how the regular returns of a disorder, not previously suspected to be regular, should be overlooked.

There is yet another cause which has prevented the regularity of this disorder from being marked, where it is actually present; and it is an important one in some cases, as connected with the history and nature of Neuralgia. Even should the nerve be affected at the habitual period, that affection is not always a fit of the violent pain. On the contrary, it may be a very slender one, scarcely noticed by a patient used to much greater suffering; or it may appear as a toothach, or a headach, or what is called a rheumatic pain of the face: and thus, although really a paroxysm of the disease, may deceive both patient and phy-

sician, and most of all when, as in the cases last enumerated, it will admit of some common or vulgar name. Such in fact is the character of the Neuralgia, in whatever place situated: and the fundamental error here has been founded on that to which I formerly alluded, namely, the assigning it a name expressive of violent pain, and the separating this particular variety from all its analogies and variations. Such are the endless errors produced by ill-chosen terms, and by giving to such terms an improper value. And still further, as I shall hereafter more decidedly show, as this disease is but a mode of the intermittent, it may be exchanged for or replaced by a common paroxysm without any local pain; while even that paroxysm may be so slight as to attract little notice from any one, and least of all from a patient accustomed to much keener sufferings.

Last of all, and particularly when of long standing, it becomes, like every other chronic intermittent, a truly irregular disease. Thus it may come as a single attack in the midst of weeks or months of repose, excited by some occasional cause; or it may, in the same way, adopt any modes of irregularity; which it is unnecessary to describe again, as it would be merely to re-

peat what I formerly said respecting chronic intermittents in their ordinary character.

Such then is the total character of the common Neuralgia of the face: and if I have dwelt on it at some length, this will render it less necessary to be minute as to its varieties, or as to other Neuralgiæ; since, the same general account will apply to all. Its similarity at least to intermittent, will even now be apparent, and very decidedly to those varieties which are attended by local diseases or symptoms; while the further evidences will appear in their due time. And if I might now treat of its cure, it will be best to defer this till I have enumerated all the other disorders of the same nature; since, with small exceptions, the same general rules will apply to all.

In examining now the varieties of the Neuralgia of the face which I am about to notice, or those of other nerves, be their apparent characters what they may, or though they should even have acquired names as independent diseases, it will save much repetition to premise, that, in every one, the same general symptoms or characters are present. The returns are periodical, under the same variations and exceptions; there are the same indications of a regular febrile paroxysm; they alternate similarly with other con-

ditions of the same general nature, or with common intermittent; their types are similarly various; and they may either be acute or chronic, new diseases or habitual ones. Without such testimony, drawn from cases more or less numerous, I have introduced no disease here; while many are supported by analogies or collateral evidences, which will be stated whenever the necessity for them occurs.

As naturally connected with the marked Neuralgia of the face, I must first notice those disorders of this class which occur in the face and the head; reserving however to a distinct place, those that are attended by visible and permanent inflammation, and those that are accompanied by mechanical injury or derangement; though this separation, almost inevitable in the present essay, for the reasons formerly stated, proves often a very awkward one, particularly in the case of toothach, where I must sacrifice the distinction that I might have wished to make, to a popular term.

### CHAPTER III.

#### *Of the Periodical Headach, and of Vertigo.*

OF all the disorders which I have thought fit to arrange under the great leading head of intermittent, this at least is one respecting which there can be little dispute, well known and pointedly defined as it generally is. Yet though it has been considered an intermittent disorder, as it in fact, could not fail to be, and, further, frequently treated by the same remedies as the common intermittent, I cannot perceive that the conviction among physicians, respecting its nature or treatment, is by any means either general or satisfactory to themselves. Innumerable cases must have occurred in every physician's experience, where these remedies had never been resorted to, and where the disease had been abandoned as incurable; and, as insinuated in the preface, I could even quote physicians of the highest note, who had submitted to it in their own persons for a long life, even in its most marked and regular form, the tertian, without adopting the obvious plan of cure, and even ar-

going to the last against the present view of its nature.

If I cannot therefore find that physic has viewed it as a variety of intermittent fever, whatever may have been the opinions of individual physicians, still less do I perceive any inclination to consider it as Neuralgia, and, if situation can, for the present purpose, be allowed to establish a leading distinction, as one of the varieties of the Neuralgia of the face. Such however is the view that I propose to take of it; while from its greater simplicity and regularity, and its more apparent connection with simple intermittent, it forms that connecting link between this leading disorder and the more painful Neuralgia, or Tic, which aids in proving the true nature of this formerly obscure affection. And being without that strongly-marked symptom, the excruciating pain, which, by attracting the chief or sole attention of common observers, has misled them so long, it is more likely to be received as a mode of anomalous or local intermittent, and, as such, to command an assent which will probably yet for a long time be withheld as to the Tic douloureux.

As it appears to me that the proofs of this identity, a triple identity, as I may call it, will be developed, partly in the history of this dis-

order, and partly in the course of a further examination as to all the Neuralgiæ, I shall commence by describing the disorder itself. And this I must do at some length; because it is by attending to varieties and anomalies rather than to pure and well-marked cases, that we discover those evidences of connection among what have been considered defined and separate disorders, which serve to mark their identity.

The periodical headach may possess any of the types of intermittent; and if I have not myself seen it under every form, I have at least known it as a double quotidian; as a single one, and as a tertian. Whether if it existed as a double tertian, it could be distinguished as such, I cannot foresee; and if it is ever of a quartan type, I cannot at this moment discover that, from any recollections or references. My learned medical readers will probably be able to supply this and many other deficiencies: the produce sometimes of pure ignorance or narrow experience, at others of a desire to avoid tediousness or superfluity.

I have never said that all the disorders which I have here collected under the head of intermittent, do, and must of necessity, arise from Malaria, though I have tried to prove that this poison is often present where it is not suspected.



#### PERIODICAL HEADACH.

We are certain only that it is by far the most frequent cause of them: yet, if it is possible, it is by no means proved, on the other hand, that simple intermittent can be produced, as a new disease, by any other cause, though, as an habitual one it is re-excited by many. But when we descend from the simple disease along the scale of varieties, or as the local affections of the nerves begin to predominate far above the general one, I am so far from thinking Malaria essential to the production of intermittent, or, to speak specially of Neuralgia, that I have made a particular division, where it is demonstrably produced, as far at least as we can demonstrate an exclusive cause, even by mechanical injuries.

I must not therefore be here understood to say that periodical headach is necessarily or exclusively the result of Malaria, or that, being a variety of intermittent in its symptoms, and cured by the same remedies, it is invariably produced by the same causes; however frequently this may be the fact, as in Spain, where the *Migraniu* is endemic in all marshy situations throughout the country. But were it even demonstrated that it can be produced by other causes, this cannot affect the theory of the diseases, as it concerns their common or generic nature, which I am attempting to establish. The action of Malaria is

on the nervous system, on the whole and on the parts: or, affecting the whole in a slender manner, it may exert its chief influence on some peculiar nerve or portion of a nerve. And till we know more of their nature and of this action, we cannot pronounce a negative, or say that no cause but Malaria shall produce even a simple intermittent: while, if mechanical injury of a nerve can produce a partial one, there may be many other causes, unknown to us, capable of generating a periodical headach.

Be this as it may, it will be found that this disorder is most common in situations of the unhealthy nature formerly described, and that it is often directly brought on by the causes which produce ordinary intermittent. But what affords a much stronger proof of its identity, is the fact that it occurs frequently, perhaps most frequently, in those who labour under chronic intermittents or remittents, or have formerly suffered from those disorders. Thus it may occupy the whole period of one relapse, as the substitute of what would otherwise have been a common one: as it is even found to do, in frequent interchanges, and through a long life, in those who possess that inveterate habit of intermittent which may almost fairly be esteemed incurable. Still more remarkably, it is sometimes found to interchange by

paroxysms with the common intermittent; or the ordinary fever of one day is replaced, on another, by the headach. Thus have I seen the headach and the ague-fit occupying the alternate days, a modification which may be considered as a double tertian, and proceeding thus through a long period; while the same species of combination has also occurred to me under the tertian type. Where the chronic intermittent, however, has been of long duration, it is more common for the periodical headach which is united with it to recur in a very irregular manner, as is true generally of the disorder in all its modes, when of such standing: and it is in these cases especially, that its real nature is so commonly mistaken, as it then wants those obvious characters which alone would arrest the attention of a superficial observer.

A headach will not therefore be necessarily removed from this division, though it should want its most discriminating characters: though it must be admitted, that where this affection can arise from so many causes, and put on so many different forms, it will often require great attention and acuteness on the part of the physician, to discover that a disorder of this nature belongs to the division under review. On this I shall hereafter have occasion to speak more fully: but I must still add here, that if I have not stated all the causes which may render that which is truly

a headach of this nature, not such in appearance, or not easily discernible as such by careless observers or mechanical practitioners, it is because I have, on former occasions, explained the various circumstances under which intermittents, whether simple or anomalous, become obscure, from the irregularity of their periods and paroxysms, and that it would be mere repetition to do this again. And not only here, but hereafter, if I do not explain why the various Neuralgiæ are so often irregular, so irregular as to afford argument to the opponents of these views, it is because I presume that what I have already said in explanation of this fact generally, will be applied, as I intend it should, by those who have attended to the former parts of this essay.

It might now be anticipated that the periodical headach should exist under the acute and chronic form both, or that it may be a new disease or an habitual one. It may be, and is often, a truly new or acute disease, or it is the first effect of its cause; though it will also appear to be such to those who do not know it as a mode of intermittent, when it succeeds, for the first time, to this in its ordinary form. How often it is transitory, or of short duration, whether from a natural cure or from the use of remedies, it is difficult to discover; as it either does not attract

much attention, unless peculiarly violent, or is not recorded, unless when it becomes inveterate and chronic. It is in this state that it becomes the especial object of notice; since thus has it frequently been known to last for years, or through life, like the other chronic disorders of this nature; yet not often without those interruptions or substitutions which occur in every habitual intermittent. If however the patients' reports could be trusted, I have known one case where it continued under the quotidian type for sixteen years, and another where the tertian form of it lasted upwards of twenty; in both, as I was assured, without even a day's interruption. Nor is there any reason why this should not be true; as the same happens notoriously in simple intermittent. And it is proper to remark here, that as it then becomes difficult of cure, or incurable, like other chronic intermittents, and particularly, like these, does not yield to the usual tonics, this has been used as an argument against its identity with intermittent; it being forgotten that the simplest form of this disease is equally refractory to this treatment, when of long standing.

To take the most regular form of a paroxysm, as the most proper mode of describing its attack, it will be found that this is as regular in its returns as that of a common intermittent, subject however of course to the analogous anticipations,

postponements, or uncertainties; and, as in certain obstinate and long-continued disorders of this character, it will also be found, that the same hour, almost indeed the same minute, is accurately preserved, even through a long life, and though it should have undergone great and frequent interruptions; and that this singular regularity also marks the more slender derangements occasionally substituted for it; which I shall presently notice.

It appears to me, that, as in the violent Neuralgia, and, as I believe indeed, in all the anomalous intermittents where pain is a symptom, the pain appertains to the hot fit of an intermittent paroxysm, and that in most cases, in all well-marked ones, an attentive observer can trace the whole proceeding. The previous cold stage is indicated by the same appearance which I have so recently described, in all respects; and if an absolute general hot-stage does not occur, there is that excitement of the vessels and local heat, often approaching, or even amounting to temporary inflammation, which marks at least a local hot fit; a hot stage as local as the previous cold one commonly is, just as if the whole intermittent paroxysm was limited to one spot, instead of occupying the whole nervous system.

I need scarcely repeat that the pulse undergoes those changes already described; that thirst, and

in short every peculiar symptom of an intermittent paroxysm may equally be observed, and with sufficient ease when the disorder is well marked. The characters are, in short, in every manner, those of an ordinary intermittent, with the addition of pain; proving the correctness with which it is arranged as a neuralgic intermittent. And under this view it is, that we so easily explain the other symptoms which so often attend it; such as previous yawning, increased and sudden secretion of urine; spasmodic and hysterical affections, derangements of the mental faculties, and, as I conjecture, vomiting. In this particular disorder, that act generally occupies the same place in the paroxysm which it does in the common intermittent; and though I do not doubt that there is a headach terminating in vomiting, of a different nature, and commonly called the bilious headach, I have had no difficulty in tracing many of the reputed cases of this nature to the disorder which I am now describing.

Variety in the mode and extent of a pain, in the ordinary painful diseases, is a subject beneath scientific notice in physic; but it is here of considerable importance, and requires examination. As always happens when striking symptoms engross the whole notice, it has here given rise to unfounded distinctions, or to a multiplication of

imaginary independent diseases; but besides this, which is an error to be rectified, these varieties enable us to trace a connexion or identity among disorders that have been too often supposed different, and, very especially, to prove the identity of the simplest headach of this nature, with the most violent Neuralgia of the face.

And if I may here venture for a moment to anticipate what belongs to the theory of this disease, it is not difficult to see how every variety of pain may here proceed from one cause. If it is an important nerve or a large branch that is disordered, the pain is proportional, as in severe Neuralgia; if that disorder be confined to the minutest ramifications, it is easy to understand how it may be milder and more diffused; while, in every case, it will also occupy an extent corresponding to that of the affected nerves, and appear under a severity which, probably, is proportioned to the degree of this obscure derangement.

In the best defined periodical headach, the pained part is generally small, when it may exist in any spot, including the face; and it is a general rule, though not without its exceptions, that in the chronic cases, whatever spot is once the disordered one, it continues so throughout the whole career of the disease; indicating a permanent morbid condition of some nerve, as in



the decided Neuralgia of the face. And thus, as these cases become severe in point of pain, do they approach so gradually to that Neuralgia, that no boundary whatever can be drawn between them; a fact which ought long since to have explained what the Neuralgia (Tic) really was.

Such very local forms of this disease sometimes occupy a point so small, that, as patients express it, they might cover it with the end of the finger; another character in which it agrees with the Tic: and thus it is not uncommon over the eyebrow or on the top of the head, though it would be trifling to point out these variations, interesting as they may appear to the patients themselves. How often *clavus hystericus*, as it is called, may be a different and an original disease, or a symptom in some other nervous affection, I am unable to say: but I have myself met with no case under this name which was not the disease in question, while the hysterical or nervous symptoms that sometimes accompany that pain, are easily explained from the facts that have formerly been detailed.

To pass over the less important varieties, I may next notice that which occupies one side of the head: even thus, varying in its extent, from the most definite hemicrania, to pains occupying more or less of the head itself, or reaching to the face, or even affecting the face exclusively: passing,

in this last case, to what is called rheumatism of the face and toothach ; disorders which I must, however unwillingly, separate from this, in conformity to general opinion. In this, as in all cases of greater extent or wider diffusion of the pain, that is commonly more moderate than when it is confined to a smaller spot : and thus the headaches of this nature may vary from a state of great severity to one where positive pain can scarcely be said to be present, and where there is rather a sense of uneasiness, or fulness, or weight, or perhaps of throbbing, or of mere heat, generally however attended with that confusion of thought which is rarely absent during a paroxysm of this disease, and which sometimes is even almost the only thing which a patient can fix on. It is not my business here to inquire from how many other causes hemicrania may arise, nor how often it may be a separate disease or a symptom of some other disorder : it is sufficient that it is one of the modes under which the disease in question appears.

I must now remark that this modification sometimes occurs under a form so slight that it attracts no notice ; not at least from a physician, assuredly, and scarcely even from the patient ; particularly if accustomed to severer attacks, or engaged in active life. It would be a matter

utterly unworthy of notice here, did it not tend to explain some of the circumstances, and some also of the errors, respecting this disease. Thus a paroxysm of it, and even of the most regular and persistent form, may occur as a mere sense of fulness or heat in one side of the face, often attended with a watering, or even a slight redness of the corresponding eye, and with a sense of fulness in the nostril, or even with a temporary catarrh of that nostril alone. Here, even the patient, uninformed as to this, will attribute these feelings, if indeed he should attend to them, to a cold, or to an inflammation or "weakness" of the eye, and the true nature of the disorder is overlooked; though if it were watched, it would be found that these symptoms were as well marked in point of time and returns, as the most severe periodical headach or common intermittent, and that they were, in fact, regular paroxysms of the habitual disease. Of this species of hemicrania connected with a partial catarrh, I also find a notice in Sauvages, under the term *Migraine*: the hemicrania being periodical, recurring, as he says, once a year, and being attended by a dryness of one nostril, a retraction of one eye, and a considerable lacrymation: while no stronger proof can be given of his utter misapprehension respecting all these dis-

eases, than to find them scattered over every part of his work, and not seldom repeated under two or three different titles.

It is an incidental remark here, but not without its value, to say, that I have seen cases of this nature where the lacrymation has been attributed to fistula, with consequences which I need not point out. Such deceptive fistula is therefore one of those occurrences which might add to the list of simulations in which Neuralgia, as well as intermittent, abounds: but if in the present division of what I consider Intermittent, I have not thought fit to make so marked and definite a classification of these false or deceptive disorders, I am the more unwilling to do so in such a case as this, where nothing but great neglect can commit the error; while further, respecting many others which I might easily have pointed out more distinctly, I have chosen to trust to the reader's own inductions, which ought assuredly now to be easy, rather than prolong this essay by minuteness, and in some measure also, by repetition.

In speaking of a certain catarrh as being probably connected with intermittent, I alluded to that catarrhal affection of one nostril which I have just pointed out, as offering a kind of confirmation of the possibility of such a disease. And on this I may now further say, that this

periodical catarrh sometimes so predominates over the headach, as to appear the sole disease ; not unfrequently also being of a severe and durable character, while then also, by what is called sympathy, often affecting the other nostril, and thus entirely deceiving both patient and practitioner into the belief that it is an ordinary catarrh. Such an affection often teases a patient through months, or even years, as do all these diseases : and if I have thus little doubt that many of the habitual catarrhs do belong to this hemi-crania, this fact still further confirms what I formerly remarked respecting the catarrh of intermittent, while the order which I was obliged to adopt has forced me to notice this subject in two places. I need not add that this, like the preceding, is a case of simulation which, but for the same reasons, might have justified an even more pointed notice.

An important observation to be drawn from the former apparently trifling circumstances is, that where paroxysms or periods thus slender are irregularly interposed in any manner among decided ones, a disease which is perfectly regular in its returns may be supposed irregular, or may seem to have disappeared when it is actually existing, or has been continuous ; and thus a truly-periodical headach, or a most regular intermittent, is mistaken for a common or an occa-

sional one, because the ordinary attention is fixed only by the most obvious symptom. Hence, not only a perpetual source of errors as regards headaches in general, but an hostility against this theory; because the practitioner does not see, or possibly has not had the means of seeing, what really exists; though the leading cause is the want of that true theory which would incite to a just observation, and correct erroneous ones.

That the fact as I have now stated it may gain the support which it really can command, it is easy to see that the relation here between such a trivial paroxysm and a decided and painful one, is exactly that which, in the simple chronic intermittent, occurs between those well-marked fits to which the disease is subject, and the very slender ones formerly noticed, which few but the patient himself, accustomed to their indications, would observe; while in both cases, the regularity and the true character of the disease are equally maintained. And if this fact may aid in the proofs respecting the true nature of all these periodical diseases, it is of much more value in relation to the cure; since in pointing out error and conducting to the real cause, it also indicates the proper remedies. Of such importance may observations apparently so trivial, and derangements of health so trifling, be rendered, by a proper induction; as, in all the sciences, there is no fact

so minute or neglected, which he who knows how to wield that science, will not know how to turn to account.

I shall offer but one remark more on this modification; and it is to point out that increase of action in the superficial vessels which so often attends it, and which, in the nostril and the eye, as I just observed, reaches to temporary, and occasionally indeed, to more continued inflammation; while further, attacking the membrane of the mouth, it often seems to threaten toothach, or to make the patient doubt whether he is not about to suffer this disorder. As it is a greater degree of that increase of action in the neighbouring vessels which attends all Neuralgiæ, so is it that tendency to the more decided inflammation of the eye and of the membrane of the teeth, commonly called rheumatism, which I shall hereafter attempt to arrange under the same head; forming the connecting link between temporary excitement and permanent inflammation.

I must yet however notice one point of resemblance between the common intermittent headach, and the Neuralgia (Tic) of the face. In the former as in this, there are often two pains, an acute and a general one, at the same time; while the acute pain also is subject to similar intermissions and exacerbations during the paroxysm. And when the disease is strongly

marked, or the pain intense, the confusion of thought formerly noticed frequently amounts to absolute delirium, as the whole disease is commonly attended with those affections of the mind or temper, which were formerly enumerated under simple intermittent fever. Thus further does this disorder, as well as the Neuralgia under whatever form, frequently excite the desire for suicide, while the very act itself has been committed; of which I shall hereafter be compelled to notice one peculiar case.

If I have formerly pointed out the occasional effect of intermittent on the intellectual faculties, I must also notice the parallel consequences which occur in the periodical headach; as is no less true of the Neuralgia of the face. In cases of long standing and of a continuous nature, and particularly, I presume, if of great severity, this hebetude, or tendency to fatuity, appears at first only on the days of the paroxysm; but, at least where bleeding has been erroneously used as a remedy, or any other debilitating system pursued, the faculties become permanently affected; though whether this is common in cases where the disease has not been thus maltreated I know not. In two very marked instances, and in persons of previously strong intellectual faculties kept in constant action, permanent debility of mind was the consequence through life; while in another,



where no plan of this nature was followed, where in fact every remedy was refused, the disease, which was of a tertian and regular type, gradually lost its severity through a course of some years, when there as gradually supervened a species of fatuity which maintained as regular a tertian period as the painful state had done before, occurring only on the alternate days, and which continued for many years that this person was in my view; which indeed, I have some reason to think, has at length nearly destroyed the patient's faculties. On the possibility of such an intermittent fatuity, I may quote an analogous case from the Mem. Acad. Sciences, Paris, in which a periodical loss of memory is thus described under the term *Oubli cephalalgique*; being evidently a modified case of the same nature, or perhaps an absolutely similar one, though ill explained, because not rightly understood; as usual.

In treating of the chronic remittent and intermittent, I formerly took occasion to notice that headach seemed sometimes to be the only very decided affection appearing to mark the continuance or the relapses of the disease. Yet, in such cases, there is, and perhaps very generally, a degree of general disorder, or of fever, greater than that which occurs in any of the cases of common periodical headach. I know not never-

theless, whether it is here worth while to point out a general, and apparently an ordinary headach, as one of the varieties under which the disease under review appears, as it is creating distinctions without a real difference. Yet perhaps it cannot well be avoided; from the order, or rather want of order, which, in submission to popular opinions, I have been obliged to adopt.

Be the propriety or the impropriety what they may, it is certain that the periodical headach sometimes appears as a generally diffused pain, without any such peculiarity of character as might induce us to refer it to the Neuralgiæ; even here however, under those several modifications as to the quality of the pain, which are far too familiar, in headach in general, to require specification. If such a headach should have periodical returns, or be attended with any of the peculiarities already described, it may be marked as a disease of this nature; while, should it be very irregular, its true nature may even then be discovered, by a careful attention to all the circumstances of such irregularity, to the previous history of the patient, and to such other discriminating points as I need not again repeat.

The judgment is however much more difficult in this case than in any of the former; as the most vulgarly discriminating characters, consisting in the mode of the pain, are wanting, and as

the popular opinions respecting headach as an original disorder, or as one originating from a variety of causes besides this, tend to mislead the observer and the patient both. It is not for me here to inquire respecting all the causes of headach, endless as they seem to be: nor in truth has physic succeeded particularly well in explaining any one circumstance that belongs to this common disease, or symptom, be it which it may. But if we are still thus ignorant, there is no reason why we should not attempt to separate those cases which come under the variety under review; since, if we do not, even here, know the exact cause, we have at any rate approximated to it, and are in possession of analogies at least which are important to the cure.

And I have reason from observation, (not however so extensive as I could wish, since this disorder seldom comes under the cognizance of physicians,) to think, that if all the cases in which patients are subject to frequent headaches were carefully examined, a considerable proportion of them would be found to originate in this cause, and that this would particularly prove the case in disorders of this nature popularly called nervous headach, generally the torment of a course of years, and sometimes of life itself: a disorder that is often endured, if not without complaint, yet without application to medicine, from the

opinion that it is incurable, and as the phrase is, constitutional. I must speak with great caution respecting a disease; of which it is so difficult to gain the management, and which can seldom therefore be properly studied; but it is one which well deserves to be narrowly investigated, under whatever form it may appear, wherever it occurs and admits of such inquiry; since, should it at any time prove to belong to the variety in question, we are at least not absolutely without remedies, however often they may disappoint us in every intermittent disorder that has been of long standing.

On this point I must yet remark, that after consulting numerous, and even professed and distinct treatises on the headach, I often perceive the most utter neglect with respect to the intermittent or neuralgic variety, even in its best marked forms, long as it has been known to physic and physicians. If bark is recommended, it is not from any definite view of its connection with intermittent fever, but apparently from some empirical association between the two terms intermittent, and bark, or perhaps arsenic; while the neglect of the other means applicable to intermittent fever, seem to prove that this criticism is justly founded. With respect again to headaches not rigidly periodical and intermittent, I cannot any where trace even a suspicion that

they may belong to this disease, though I shall be gladly corrected by any one of more extensive reading on this subject: while I need not say that the greater number of these writers, and the recent ones in particular, are always seeking the cause in derangements of the digestive organs, (the fashionable seat of most chronic disorders) whether these are present or not; while the remarks formerly made on dyspepsia, show that they must often be present, yet as appendages, not causes of the disease in question.

If I have thus examined with as much detail as appeared useful, the periodical or intermittent headach, there still remains to be noticed, an affection, or a collection out of some of the preceding symptoms, for which I can find no better place, I know not well what to call it, from its half imaginary half mistaken nature; while I should assuredly not have bestowed a paragraph on it, had it not been for the pernicious practice to which it has led, and which, being one among the fashions of the day, seems also to be rapidly increasing. Though it is not a disease, nor even a symptom, nor any thing else that can be defined, consisting as it does in a false and irregular view of many symptoms, what is here meant will be understood, when I repeat the fashionable term by which it is known, namely, "a flow of blood to the head."

I am not under the necessity of inquiring what is meant, physiologically, by the phrase, a flow of blood to the head, while I conjecture that those who use it so readily, would be somewhat troubled to explain their own meaning; nor is it within my compulsory limits to discuss those cases, be they apoplexy, phrenitis, or what they may, in which a derangement of some kind, of the circulation within the brain, does take place. In the cases to which I allude, it has been recently discovered, (for the disorder is of very recent invention) that the blood flows in some very improper manner to the head, even should the patient be a delicate and young female, a pallid and enfeebled, night-watching student, a nervous lady of fashion, exhausted by London vigils, or any one else of all those who were once esteemed to suffer from debility and nervous diseases; a tribe too numerous to mention in detail. Who was, or who were, the enlightened discoverers of this new philosophy, may be asked by those who can themselves answer it: a physician must hope, for the honour of his profession, that it was the discovery of the cuppers, and that it has been propagated by the self-empirics who are now fast becoming the rivals of his brethren, in the science, and of the apothecaries, in the art.

It belongs to another subject, and not to mine, to investigate the various disorders, whether of

the general system, or of the digestive one, which give rise to those numerous, yet often trifling affections of the head, to which this modern philosophy has been applied; affections formerly esteemed nervous, and, if not exactly explained by the term sympathetic, yet well understood under that received name. That which is here my business is, to say that this kind of derangement, or these symptoms, unquestionably often sufficiently teasing to an irritable constitution, occasionally also in themselves not a little troublesome, but always aggtavated in the patient's mind by the species of terror or anxiety to which this false view of their nature gives rise, are very frequently the produce of the intermittent affections of the head which I have been describing, or are actually cases, if sometimes obscure ones, of the periodical headach; disorders of a neuralgic character.

From what I have already said of the modifications of that disorder, it is easy to see how its characteristic and explanatory symptoms might be overlooked, and how the pain itself, under many of its forms, might be conceived, by those who have adopted such a false theory, to indicate even a serious local disease of the brain. But there are other symptoms attendant on this disorder, which tend still more thus to mislead: while, in the minds of those who are ever ready to attribute

every affection of the head to "fulness of blood," "flow of blood to the head," and so forth, they have confirmed this false theory, as they continue to furnish arguments for its support. If I already pointed out some of these, I thought it most advantageous to reserve others to this place; and I may now notice the whole together at the hazard of some little repetition. The real, or practical importance of this disorder, if disorder it can be called, though it is of an artificial importance and the produce of erroneous practice, will justify my thus dwelling on what I should otherwise have passed over, and trusted to the reasonings of those who have read the account of this disease just given.

Lest however it might be supposed that I am describing symptoms to which I have myself given a wrong solution or a false colouring, I must premise that I have made use of no case for this purpose in which the real cause or nature had not been ascertained by all the tests which I have invariably applied to every one of these anomalous diseases; and chiefly by their periodical nature, by their occurrence, as a variation, in persons subject to the chronic intermittent under several other anomalous forms, and by the fact of these affections alternating, even as single paroxysms, with paroxysms, either of common intermittent, or of intermittent headach, or of



some other irregular form of this Protean disease.

Where a prejudice respecting this "flow of blood to the head," as the necessary cause of all such disorders, is rooted, or among those who, entering on the practice of physic under such opinions received from teachers, are content to proceed, and to believe also, as others do, without inquiring, even common headaches, when inveterate or habitual, are usually attributed to this cause; as are perhaps, even more commonly, those irregular ones which do not put on the highly defined character of a periodical or intermittent disease; while even this very disorder in its most accurate form, is, now, not unfrequently attributed to this cause; such is the power of example, or the influence of fashion.

But if such pains are of the slight, transitory or irregular character that I have described, they are also frequently neglected, as trifling or unimportant, while the judgment is formed from the accompanying symptoms: and still oftener perhaps will such erroneous judgments be formed, when, as is not unusual, the pains are altogether wanting, or, as also happens, when they occur but occasionally amid the other more constant symptoms.

Of these, I have already noticed a sense of fulness in the head, which, in the hemicrania, is particularly remarkable, from the contrast between

the healthy and the ailing division, and which, as I then noticed, may exist without any pain. Now, similarly, where a headach in this disease might have occupied the whole head, as a paroxysm, it may be replaced by this mere sense of fulness; and thus is established the opinion of an excessive and dangerous "flow of blood to the head." Such also is this feeling at times, as to convey the sensation of high tension; while, further, this proceeds so far, occasionally, as to become a sensible throbbing; or the patient can feel the pulses of the heart in every part of his head without even touching it.

It must be admitted that such symptoms carry with them every evidence of an increased action in the vessels of the head, or of a flow of blood to the head; and it is still less surprising to find prejudiced or inattentive practitioners misled by it, when the action of the carotid arteries is sensibly increased, and when, sometimes, the exterior jugular veins enlarge; both of them, symptoms which occur now and then, in violent or particular cases. And there is, in fact, a really increased action, so that, in words, the theory is more or less correct: while the important question still remains, what the nature of that action is, where it lies, and what is its cause: since, on the determination of this, must the practice, for good or evil, depend. I hope to produce here, analogies

enough to show what the practice at least ought to be, if I cannot explain in what this singular action of the blood-vessels consists.

In the general description of common intermittent, I reserved chiefly to this place, the mention of a peculiar symptom which often attends it, and which, I must also remark, belongs to the hot stage. The fulness of pulse which succeeds to its peculiar condition in the cold stage, is well known, but it is attended, often, with a circumstance which scarcely occurs to the same extent in any disease that I know. This, difficult enough to describe in words, is a sort of bounding of the artery, as if it was displaced by some action of its own, independent of that of the heart, at each pulsation; and, when sought for, it will be found to extend through every artery of the body, so as to render sensible to the touch, numerous minute branches or deep-seated vessels which are never otherwise perceptible. And very often, further, it is so energetic, that the patient himself can, when lying at rest, feel and count the pulsations of such arteries, though nothing should touch them, and this, even in the fingers, to their very extremities, as in numerous other places which I need not suggest to anatomists. That this action also does really belong the arteries themselves, is plain; because it is not necessarily attended with any such increased action of the heart, though

this sometimes also happens, as might be expected.

Now this state of the circulation is but a part of the stage that I have mentioned, and is transitory; subsiding when that is past, and often so suddenly and completely, that we can scarcely believe what we have just witnessed, when the change happens under our hands. Yet it is very often so far mistaken, as to be made the reason for blood-letting and the justification; after which it, of course, subsides, affording still further proof to the ignorant or prejudiced, that this was necessary, though it would equally have ceased at its natural period had nothing been done. Should this practice be repeated on every new occasion of this nature, in a quotidian, or even in a tertian, it is very certain that the patient would not long trouble his surgeon; while, in fact, it is a mistake perpetually committed, and with consequences which I shall have occasion to point out hereafter.

I have here described an acute intermittent; but the truth is, that the very same symptom often occurs in the chronic disease; and it is far from uncommon to find cases of this nature, in which the only very ostensible symptom of this paroxysm is this temporary and singular state of the arteries, though it is, in reality, always preceded by one of those obscure cold stages which I have already noticed. And in some of these

cases also, the heart seems more affected than the arteries, or the patient counts the return of his paroxysm by an increased action of that organ, not amounting to palpitation, but obviously connected with it, or being a milder form of that local symptom.

If this, and the palpitation also, is a partially increased action in the arterial system, so may that action of the inferior aorta which I formerly mentioned be viewed in the same manner; and if, when the intermittent is universal, or the whole nervous system affected, the entire arterial system is thus acted on, it is not difficult to admit that a portion of it may be similarly deranged when the intermittent acts, rather partially than universally, on the nerves, as it in reality does in the cases of the heart and of the aorta: when it is of that character which gives us all the local affections, be they Neuralgiæ or what not, which have already been described.

Now it is easy to transfer this reasoning to the diseases of the head under consideration, since the analogy is striking. Here, the local disease prevails over the general one; or the intermittent, instead of occupying the whole system, is limited, or chiefly limited, to the head. It is acting on the nerves of the head and face when it produces Neuralgia, a common periodical headach, or the more general "nervous" or

"rheumatic" headach: and thus would it be easy to foresee that it should act, or might act, especially, on the arteries of the same parts, supplied by these diseased or suffering nerves. It would be a local hot fit with augmented arterial action, just as there is a general hot fit with this symptom; and I have already shown that the painful state of periodical headach or Neuralgia is the hot fit, and that this stage is often, like the cold one, absolutely local and limited.

And if such might be the presumption *a priori*, it is confirmed by other facts. I have elsewhere mentioned partial intermittents affecting a single limb, or more, or less; and, of these, some remarkable cases are mentioned by authors, where the paroxysm has been so complete and so regular, that each of the three stages took place in the part, while the body at large was unaffected. In such cases, it is plain, the arteries of that part must, during the hot stage, have been in the very condition here described; while it is obvious, that not only the same might take place in the head alone, but that this must be a frequent event, when it is thus proved that hemicrania, or periodical headach under any of its forms is such a partial intermittent: the probability of that disorder being really an intermittent, being further confirmed by the occurrence of these other partial cases.

Moreover, in Neuralgiæ, every where, and in

these headaches, there is an increase of the action of the smaller arteries, as I have formerly shown; producing redness, or temporary and transitory inflammation, or else causing actual inflammation, as it does in the "rheumatism of the face:" and further, as I shall show hereafter, giving rise to a peculiar ophthalmia, a neuralgic ophthalmia. Indeed, even in a common headach, where the smaller nerves of the membrane are the seat of the pain, there is increased action, or excitement in the neighbouring arteries, as is well known; extending often even to the larger ones, and even while the heart is unaffected and all the rest of the vascular system tranquil. So certain is it that undue arterial energy can be excited by locally disordered nerves, in a single spot, without fullness of blood, or "flow of blood to the head," or tendency to inflammation or to plethora, and even in subjects labouring under the most opposite conditions of exhaustion and debility. With this indeed, under various modes, physic is far too familiar to render it necessary for me to point out the circumstances under which it happens. Even in these cases, modern fashion is now resorting to this pernicious theory, pernicious in the practice to which it gives rise: when surely no physician really acquainted with disease, would consider that such partial increase of action in the vessels of the head, was a justifica-

tion for blood-letting on the ground of a dangerous plethora or misdirection of the circulation.

What the exact nature of this increased local energy of the arteries is, any more than what it is when extending over the whole system in the common intermittent, we do not know ; so little do we really know of any thing in physiology or pathology. One fact here I may however add ; and that is that in these local cases, it seems often to begin in the extreme vessels, and is from them communicated to the larger ones. But whatever it be, and whether in these particular cases it extends to the brain as it attacks the exterior small arteries, and even, as I remarked, the carotids, there is no evidence of its exciting inflammatory symptoms there ; though we can conceive this possible, at least under a certain form, since it produces this effect on the eye and the membranes of the mouth. If it were even thus, it is not a justification for blood-letting, but the reverse, as it will shortly be proved that all the neuralgic inflammations are aggravated by this treatment, as is the painful part of the disease itself under all its modes, and as is every chronic intermittent, be its form what it may ; while further, real diseases of the brain, or injuries to the nervous power, are here produced by blood-letting, as I have often noticed already, and shall have occasion to remark again.



But further, if this increase of action of the vessels of the head is suffered to take its own course, it subsides within a limited time, or with the local hot stage which produced it: maintaining, and proving still more effectually and completely, the analogy which it bears to the parallel symptom in the common intermittent fever. This would not happen in any other case of diseased, inflammatory action, either in the brain or in any other part: and it ought itself to be a proof that blood-letting is here unnecessary, (while it is in fact injurious) and that the common theory of increased action or flow of blood, true as it is in words, is false as it relates to science, in the view commonly taken of it, and pernicious as it relates to the treatment. And as far as it relates to the possible termination of this increase of action in membranous or "rheumatic" inflammation, which is the only kind of inflammation that does follow it, I may observe that this event is very rare, compared to the cases where it does not occur, and therefore diminishes the force of even the false arguments in favour of this practice that might be derived from it: while even that inflammation, where we can really prove its existence, is of a peculiar character, so as, almost universally, to be aggravated by evacuating and debilitating remedies, as I shall have occasion to prove fully hereafter. Such is the view that I

have taken of this particular symptom or collection of symptoms, now called the "flow of blood to the head:" and if I have noticed it, as was here my duty, as belonging to the periodical headach or local neuralgic intermittent, it seems to me that nearly the same reasoning, with the same practice, applies to all the cases where these symptoms occur, whatever may be their original causes; since, in all, the pathological condition is similar.

The only other symptom or disease which I think it worth while to notice, is giddiness, vertigo in medical language; not only because of its occurring as a prominent symptom or local intermittent, but from its leading, even more decidedly than the last named, to the same erroneous and pernicious practice. This I may consider as one of those marked simulations which might have demanded for itself a separate division, or which I might have arranged in a distinct class with others which I have similarly but touched on where it seemed convenient; since, in strictness, it does not appertain to the present place. But if, for want of a better one, I have been obliged to speak of it here, I must observe that it does not necessarily belong to the periodical headach, though often occurring with these; since I have seen it occasionally as a mere variation of the common chronic intermittent; a

substitute for ordinary paroxysms or for other anomalous ones, and without pain.

I formerly spoke of the intermittent lethargy or coma, a common source also of erroneous judgment and mischievous practice; but the giddiness in question is unattended with lethargic symptoms, and as far as I have seen, does not even affect the mental faculties. In every thing but this, it resembles the giddiness of intoxication, so that the patient, with all his efforts, cannot walk straight, or, when it is excessive, fancies the neighbouring objects are in motion. It is a symptom well known as occurring from certain poisons, and also in nervous affections; in some of which at least, where recorded, it is not unlikely to have depended on the cause under review.

When it attends the intermittent headach, it either actually accompanies the pain, which is occasionally a mere neuralgic point, or it comes alone alternately with that, or else it will return periodically, for even weeks, by itself; and in this last mode also I have known it replace an ordinary chronic intermittent. If its accuracy of period or duration is subject to the various irregularities which I have formerly pointed out in all these chronic and anomalous intermittents, they can now be easily explained by the reader; while I need not further detail the characteristics

by which it is to be distinguished, since it would be to repeat much of what has so recently preceded. But all these facts must be kept in mind ; since the prejudices with regard to the value of this symptom, being the same which have just come under review, tend similarly, or perhaps even more, to mislead the practitioner, and indeed the patient also. It requires in fact, no small degree of moral courage in a physician, to resist, or change, the mischievous practice resorted to in these cases ; and very particularly, should the patient's age, quality, make, or habits, confirm himself and his friends in the opinion of a threatened apoplexy.

If I need not dwell further on this symptom, since it would be nearly to repeat what I have just said, neither need I add much respecting the practice, since that also would be to repeat the preceding remarks and cautions. The paroxysms disappear of themselves, as do all others ; and thus also will the entire course of such a symptom, as so often happens in all these chronic intermittents ; and if remedies are to be resorted to, they are those which are applicable to the whole tribe, and which will be examined, as far as they have not yet been so, hereafter. The injurious practice is the same ; while, besides blood-letting and cupping, low diet is also a favourite remedy in this case. Of this, the evil

may be conjectured from the former remarks on that subject; and the result of the whole is to produce a vast train of other evils, to which I have already alluded, and even, as I have more than once seen, death. Whether this result, under such treatment, has any peculiar connection with these local diseases of the head rather than with other forms of intermittent, I cannot conjecture; but I have seen one such case, vertigo, where successive blood-letting and cupping produced, and so gradually that the cause could not be mistaken, a confirmed and very frequent epilepsy, which was nevertheless cured after some years, by a change of practice, together with all the other intermittent diseases which had, from the beginning, been sufficient to prove the true nature of this vertigo.

I may now terminate this account of the intermittent or periodical headach, (the neuralgic intermittent of the head,) and of the disorders or derangements which it was convenient to connect with it; but there remains yet one case which I must place here, because I know of no other so convenient. If but one has occurred in my own experience, and that I am weary of unsuccessfully searching through authors for information, it is not impossible that some of my readers may be able to add to it from their own experience. This was a case of periodical and quotidian deaf-

ness, so regular in its attacks that no doubt could be entertained of its real nature ; particularly as that was confirmed by the former diseases of the patient and by other alternating symptoms. That such deafness does sometimes occur in the cold fit of an acute intermittent, I have formerly remarked : and since I have also shown that many of these peculiar local affections or anomalies occur equally in the chronic varieties, if under differences already explained, it is easy at least to admit the possibility of such a periodical deafness from chronic intermittent ; while it is plain that I might have ranked this case in a former chapter instead of the present one. It has not always been easy to determine on the best place, amid the division which I was compelled to adopt for the Neuralgiæ.

## CHAPTER IV.

*Of the Neuralgiæ of other Nerves in various parts of the Body.*

THE description which I have given of the Neuralgia (Tic) of the face has been purposely made minute, that I might not again be obliged to enter into such details in describing this disease as it occurs in other parts of the body. And if in treating of the periodical headache, I have entered into similar details, and into reasonings somewhat extended, it was partly also that I might not again be obliged to go over the same ground in what is to follow. Between the two, I have shown that the neuralgic diseases are periodical, and connected with common intermittent, reserving however some further proofs and arguments to a later period of this essay; and in the account of the one or the other, almost every essential circumstance that can occur in the other Neuralgiæ has also been explained. Thus, where a large branch is affected in any other part of the body, the case and the symptoms are referable to the Neuralgia (Tic) of the face; while the affections of the minute ramifications produce symptoms or disorders analogous to those noticed

under periodical headach, but differing in situation. It might be inferred also that the quality of the pain, or the symptoms in general, would be partly regulated by the peculiar nature or offices of the affected nerves: and accordingly such variations will be found to occur.

As long as the unfortunate term *Tic douloureux* continued solely allotted to this disorder, it was scarcely conceived that it could exist any where but in the face; and it is but recently that the existence of other Neuralgiæ has been admitted, while, even now, this belief is very limited, and indeed the fact itself denied or doubted by many. And if we refer to authors, we shall find many cases recorded of painful diseases, (though it is commonly the most remarkable ones that have been selected,) where it is evident that the disorder could have been nothing else: while we also find them sometimes represented as wonderful or mysterious, and not unfrequently are almost inclined to smile at the suppositions produced, or at the *ambages* of the narrators in attempting their explanation.

Within the circle of our own observation, if we meet with the same circumstances, we can more easily perceive the mistakes, both in practice and opinions, respecting these cases: mistakes so common, I may almost add so universal, that there is no physician who, if he shall adopt



this view and reflect on his own experience, will not be able to recollect endless cases of this nature, and I might almost say, scarcely one in which the true nature of the disorder has been understood. It will naturally be asked, as was formerly remarked of Tic itself, for what they have been, for what they are now mistaken; but the answer would be as long as the places where they may occur are numerous. Rheumatism and gout have perhaps sufficed for the most frequent solutions: the latter having been often called on to countenance or father many more diseases than this. I have already mentioned an instance where the pain was attributed to a diseased bone, and many more such have come under my notice: while scirrhus, strictures, diseased glands, and far more than it is worth while to name, have equally been the excuses for ignorance, where the peculiarity of the situation admitted of such explanations. That also, among these Neuralgiæ, there are at least two which have gained specific names for themselves as if they were independent diseases, I shall hereafter shew.

It might have been conjectured long ago, and with no very great effort of ability in the art of generalization, that if a nerve in the face might be thus diseased, so might any other nerve; and it does appear somewhat wonderful that Sciatica

had not long ago led physicians to this obvious inference, at least for that particular case, had it done no more. And accordingly, if every individual nerve in the body has not been the seat of Neuralgia, it has occurred in so many, even in my own limited experience, that we have no reason to exclude it from any, but have on the contrary, reason to expect, that whenever the disease shall become generally acknowledged and observed, there will be produced cases of its occurrence in every part of the body, and that such disorders will also be found not less widely and commonly diffused.

With respect to the evidence that the diseases which I am about to point out are truly Neuralgiæ, I may anticipate the further proofs that will hereafter be given, in a general summary, as also such particular ones as any of the remarkable cases here quoted may require, by saying generally, that they are of the same nature as those which have already been treated of on so many occasions. The quality of the pain is the same as in the one or the other of the analogous disorders occurring in the head; while there is neither organic disease, nor inflammation, nor gout, nor any of the other well known causes of pain present to justify it. It is periodical, or transitory, and recurrent, and through long periods of time, even through life: subject of course to those irre-

gularities in this respect which belong to all the chronic intermittents; the nature and causes of which have already been explained. Very often we can trace it to the same causes; and while it is cured by the same general remedies as common intermittent, with the addition of such local ones as are found of use in the Neuralgia of the face, it is exasperated or rendered permanent by that which is equally maltreatment in all those diseases: while also the very pointed evil consequences produced by the evacuant and debilitating practice, are the very same or exactly analogous to what they are in Intermittent and in acknowledged Neuralgia, whatever be the place of the pain. Further, these pains, or painful disorders, be the situations what they may, alternate with common Intermittent, in the several ways already described as occurring in the local anomalies of that disorder, and in Neuralgia and periodical headach; that is, as whole periods, or as mere paroxysms: while, of course, they are also irregularly intermixed with such affections, as happens with respect to the whole of the disorders treated of in this essay, whenever they are of long duration or have become an inveterate habit.

Thus also, in a patient of this nature, it is not uncommon to find a very great number of all the disorders that have been here enumerated,

co-existing or succeeding, and in every possible mode of combination and succession. The same patient, for example, who has suffered common intermittent, will be found to have also experienced more or less, or even the whole, of the anomalies enumerated under that disease, together with the Neuralgia of the face, the periodical headach, and a certain number of the neuralgic diseases which I am about to record; all these several affections alternating in different ways among each other, and many being occasionally united; while, what renders the proof of the nature of these last complete, is, that whatever period is the habitual one of the commonest intermittent paroxysm, the same will mark the recurrence of every one of the affections in question. Such a patient, (and I have seen more than one such,) becomes in himself a perfect nosology of this disease, and carries in his own person a demonstration that ought to convince the most incredulous. Lastly, I have never seen a case of these remote and less common Neuralgiæ, where it was not easy to trace that febrile state, which, however slender it may often be in all the local affections, is never absolutely wanting, and ought never to escape the eye of a real physician. The pulse undergoes the same changes, the fit of pain is the hot stage, and the cold stage may be found, at least by means of those delicate tests which I

have already pointed out: nor have I ever been introduced to a patient reported as labouring under some unknown and extraordinary painful disorder, that I could not pronounce at once, from the mere physiognomy, (taking care to be present before or at the accession,) what the disease was; provided of course that it was really a Neuralgia, as, in truth, has almost invariably proved the fact.

I have only now to add, with respect to the following Neuralgiæ, that as some of the cases were solitary ones, (a circumstance which I must attribute, I presume, to my limited experience,) and others were of a peculiar character, I have found it expedient to depart occasionally from the rules I had laid down for the more common diseases of this character, and thus to give some cases in a degree of detail that I have elsewhere avoided. I believe however that this will have its advantages; as such minuteness and example will serve as a guide to those who have hitherto not attended to these diseases, better than a more general statement would have done. And if I must thus often repeat symptoms and circumstances that have already been discussed, it was a proceeding which, on this plan, could not have been avoided.

#### OPTIC NERVE.

I CAN only presume that this was the real place of

the disorder, from the position of the pain, which was described by the patient as if a red hot needle had been passed deeply through the centre of the eye. As this disorder accompanied an attack of Neuralgia in the upper jaw, or rather replaced it, appearing at the moment when that ceased, and as it was cured by arsenic, there was no reason to doubt of its nature.

#### TESTICLE.

Of this I have known, personally, but two cases; while I have reason to suspect that it has occurred frequently, and been mistaken for an incipient scirrhus. In one of the cases to which I allude, this error was in fact committed; and after a long period of suffering, the gland was extirpated in the usual manner. It was found to be sound, and, as generally happens when the division of the nerve has been resorted to in the Neuralgia, it returned in the cord. This case was known to me, only after this last event; and as the patient was an opulent one, there had been no want of advice respecting the disease. It must be hoped that such mistakes will now become less frequent; while I must not even allude to the place where this one was committed.

The other case, under my own care, was immediately cured by arsenic; while its nature was rendered perfectly evident by the slight paroxysm

of intermittent which attended it, and by its having alternated with another Neuralgia. As might be supposed, the pain in this case was extremely violent; and it was described by the patient as rendering him entirely blind, (as he expressed it,) to the surrounding objects; as if the whole world had disappeared from his sight, and all recollection was obliterated. Had such a pain continued even for a few minutes, it must have produced delirium.

Not to make a separate division of one, as yet solitary case, and of a case also perhaps not sufficiently marked to satisfy every one, I shall here barely notice that I have met with what I myself believed to be an example of this disorder in the Palus: the mode of the pain, and the attack, being precisely that of a Neuralgia, and the patient a young and otherwise healthy man, assuredly free, during the whole long period of this affection, (which was in the middle of the glans, not at the extremity,) from any affection of either kidneys, bladder, ureters, or urethra.

#### HAND AND FINGERS.

I HAVE found many cases of this nature, but shall describe only two, on account of the particular circumstances attending those. In one, a patient who had suffered from chronic intermittent and Neuralgia in various forms, the affection

was in that small branch of the radial nerve which runs along the metacarpal bone of the fore finger. The usual symptoms were present ; but the peculiarly superficial nature of this nerve, and its place on the bone, enabled me to determine a change of structure in it which can seldom be observed, and which is probably always present though it has been little suspected. Had it been extirpated, as was wished by a surgeon of high repute, I might have been enabled to ascertain more exactly what the nature of this change was ; though it is a piece of pathology on which dissection has not yet thrown any real light, as I shall hereafter show : but I cannot concede that this species of morosity is justifiable, not uncommon as it may be.

The pain was limited to a space which a pea would have covered ; and in the progress of the disease, which lasted about four months, as no remedies were used, it gradually enlarged so as to form a knot, or swelling, of similar dimensions ; or, more accurately speaking, about a sixth of an inch in diameter. From the extreme sensibility of this swelling, which could not bear, literally, the touch of a feather without pain, there was no reason to doubt that the nerve itself was the seat of it ; while I must further remark, that, even after the Neuralgia had disappeared, the swelling continued, though gradually diminishing, for



many years; nor has the nerve, even now after eight years, ceased to be irritated by a touch, for a considerable space above this part; the most gentle pressure producing, throughout it, from the finger's end to a point high up in the arm, the well known tingling sensation which follows the injury of a nerve.

In this case also, it was particularly easy to remark the high increase of sensibility, not only in the nerve itself, but in the surrounding skin, which attended the periodical paroxysm; and further, as indeed happens in many other cases, to trace the gradual progress of a painful state, upwards through the great trunk of the nerve, as the disease gradually increased in severity. And further, I had here also an opportunity, very particularly, of watching the effects of blistering; which were, invariably to increase the painful state, and very remarkably to enlarge the circle of that general pain and irritation which so commonly attends Neuralgia: and as the same experiment was repeatedly tried with the patient's consent, the demonstration was highly satisfactory; confirming what I have ever found to be the fact in this disease, and, if I mistake not much, confirmed also by what happens in sciatica, where I at least have always found the effect of blisters mischievous.

If the extreme sensibility of the parts here is

at variance with what is familiar respecting pressure in this disease, I believe it all admits of explanation, with a very slight degree of attention. Where a large branch is affected, rude contact or pressure, or, should the nerve be superficial, as it was in this case, the slightest touch not only increases the pain, but very often excites a similar pain in some distant nerve, or causes a pain, or a tingling or shooting, in the remainder of the diseased branch. But when the disease is seated entirely in the minutest cutaneous or membranous ramifications, the pain is often diminished by firm pressure; while it is irritated, as I formerly observed, by a gentle superficial touch, even by drawing a feather along the surface. And further, in these cases, if the leading branches are sound, the pain is diminished by pressure applied to them; cutting off in some measure, we may suppose, the nervous communication. In toothach and headach, this effect is familiar, and well known to practised sufferers; who learn to find out by trial where the chief branches of the nerves lie. And if it is true that exercise or motion of the parts always increases the painful state of Neuralgia, as is familiar in sciatica, it is easily explained from the disturbance of the disordered nerve produced by the pressure of the muscles, or otherwise.

Having noticed here this peculiar sensibility of

the cutaneous ramifications, I may suggest the possibility (for it is no more) that some of the singular cases recorded, of a morbid and painful increase of sensibility in the skin, may have been of an analogous nature; Neuralgiæ of those nerves. Never having had the fortune to see such a case, I can but offer this as a conjecture, and as a suggestion to be verified or not by future observation. No other cause at least has been proposed; and this one is possible; while that possibility is supported by the well known augmented sensibility, not only in the skin, but in the hearing and in the sense of smell, which so often occur in intermittent; as well as by the facts under review.

It would be useless to detail in the same manner all the different cases of Neuralgiæ occurring in the fingers, which I have seen: I may confine myself to little more than the bare mention of two or three others, in which there were peculiarities, the indicating of which may prove useful to such of my readers as may not have had much experience in this disorder. The first of these was viewed as a cramp of an inexplicable nature, and had consequently been a cause of long continued suffering, under a trifling practice with antispasmodics. In this, there was a daily contraction, for a few hours, of the middle finger, attended with considerable pain; and there was

as little difficulty in ascertaining its real nature, by the physiognomy of the patient, as there proved to be in curing it by a few doses of arsenic.

Another case had been mistaken for gout, the pain being seated in the knuckle joint of the little finger ; while what renders this instance remarkable, there seemed no intermission, or thus at least the patient positively asserted, during a month through which it lasted. It was complained of as very severe, and as occupying the space of a pea, while attended with the usual sensibility of the surrounding skin, but without swelling or redness at any time. This ought, negatively at least, to have indicated its real character ; nor shall I be surprised to hear of many more such cases when this subject shall be better understood. In this instance also I had an opportunity of remarking the evil consequences of blistering ; nor could I indeed have avoided that, since the mistake, like the practice, was my own ; this somewhat obscure case having occurred in the earlier days of my investigations on this subject, and long before I was aware of its extent, or of the various appearances of Neuralgia. That I did not cure it by my practice, I am bound to add : but having instantly, in a minute in fact, disappeared on the occurrence of a periodical toothach attended by an intermittent, which

I doubt not I had previously overlooked, its real nature became evident; while numerous similar terminations since that time, have left no doubt in my mind respecting its real nature. The only other case of the occurrence of Neuralgia in a finger which I think it necessary to point out, was in reality a case in point: since, in this, the pain was suddenly transferred from the finger to the face, producing a regular *Tic douloureux*, which again ceased, to reappear in its original place.

#### KNEE.

I THINK it particularly important to notice the Neuralgia of this joint, because in three of the cases which I have seen of this variety, it was reputed to be of a scrofulous nature, and to threaten what is called a white swelling. In one of the cases, it had lasted five years; and as the pain was very severe, the surprise had long been that no swelling could be discovered by the touch. Had these remote Neuralgiæ been then suspected to exist, or had the disorder at large been understood, as I trust it will now be, it could not have remained a subject of doubt for as many days, since the attack was quotidian and accurate; and it is one, yet but one out of thousands of cases, which shows how necessary it is that the knowledge of this disease should be universally spread among practitioners, since the

quantity of human suffering that has already resulted from that ignorance is incalculable. I need scarcely say that, in this case, gout and rheumatism had been resorted to for the solution, when, after some duration, no swelling or disease of the bones could be discovered.

But one further remark on it is worth making. The pain had always been severe; and from that, and its long duration, the constitution of the patient, a female in the better ranks of life, was reported by the attendant practitioner, to be "broken down" by the suffering. A mere glance however was sufficient to show, not only that chronic intermittent was present, but that she was labouring under visceral disease, probably in the spleen; and thus it frequently happens in these cases, wherever they occur, that such a state is ignorantly attributed to a "broken-down constitution." It is scarcely worth while perhaps to add, that the pain soon yielded to bark and arsenic given alternately; but many more months, added to change of air from the unhealthy and marshy situation where this patient resided, were required to quell the simpler intermittent which attended it.

Of two other cases in this part, it is worth while to remark, that the extremely acute pain was situated over the very edge of the head of

the tibia, yet between the harder parts and the skin, as the patient determined it; while the affected place was not more than the eighth of an inch in dimensions. As scarcely any accuracy of dissection could produce a visible nerve in this precise spot, it follows that a perfect and intense neuralgic pain may exist in the most minute branches; a fact which has occurred, in my experience, in other parts: so that the want of a demonstrable nerve must not be used as an argument against the existence of the disease generally, any more than it must be permitted to blind the practitioner as to its possible presence in any individual case of difficulty.

The last of these cases which I think it worth while to notice, was remarkable for its double tertian, or alternating, form; a fact not very unfrequent under different modes, and which I have noticed elsewhere. I think, at least, that the term double tertian may be applied to it, from its resemblance to that mode of the simple intermittent in which the two fits are dissimilar, and from its analogy to those cases, not uncommon, in which a fit of Neuralgia and a paroxysm of common intermittent occur on alternate days. And it belongs to that class of cases in this disorder, which aids in establishing the common generic nature of all these diseases; being one

of the links which connects the most simple and regular intermittent at one extremity, with the most obscure Neuralgia at the other.

In this case, there was, on one day, a pain in both the knees, and, on the alternating one, a pain in one arm; and thus had the disorder lasted a long time, to the great discomfiture of the physician by whom I was introduced to it, and who, as might perhaps be conjectured, had considered it as an irregular gout. As I remarked before, it is probable that some analogous painful cases have been noticed by the older authors as coming under the *Quotidiana* or *Tertiana arthritica* of Sauvages: but it is abundantly plain, that this has only happened when a marked intermittent has accompanied them, and that, in other instances, the same difficulty has been found, or the same errors committed, as in our own day. Of this indeed, as to almost every anomalous intermittent and every Neuralgia which I have enumerated, and even indeed of more, if I am not mistaken, I could produce proofs by extracting cases from authors and accompanying them by an appropriate commentary. Such an addition to this essay might indeed be an useful one; but it is plain that, to its necessary and natural length, the requisite criticism would add so much, as perhaps to cause another



volume in a book which is already twice as long as I intended and wished.

#### TIBIA.

I FORMERLY took occasion to mention an instance of this variety; when I also remarked that it had been attributed to a diseased bone, and that it had been proposed to make an incision upon the part to relieve imaginary matter or caries. This is a supposition, and a proposal also, which I have met with on more occasions than one; as I have further seen such cases treated by mercury and by sarsaparilla, under the notion of a syphilitic disorder. That this disorder also may thus have been cured, I have little doubt, from the occasionally beneficial effects of mercury in Neuralgia: while it is plain how such a cure would confirm, by an additional fallacy, the originally false views of the disease. I know not why a Neuralgia, which, in this case, always appears to the patient seated in the bone, and which, by surgeons, is referred to the periosteum, should occur here above many other places where we might equally or preferably expect it; yet many cases of this nature have fallen under my notice in my own narrow experience. Alternating, in two remarkable instances, with the Neuralgia of the head, and occurring, in two others, in a very marked chronic

intermittent, it was a variety that could leave no doubt behind, while the truth of the views was confirmed by the method of cure.

If however I have here said that I know not how to account for a kind of preferable occurrence of the Neuralgia in this part of the tibial nerve, its seat being, from the place where I have seen it, in some very minute and undemonstrable branch, it is a question which I cannot well pass over without proposing a suspicion for future investigation when this subject shall be better understood. And being a suspicion, I have not chosen to introduce it into the general account of this disorder, that I might, as far as possible, keep all that is fully proved, or what I consider as demonstrated Truth, free from what, being imperfectly proved, might throw a shade of doubt over the surrounding portions. This suspicion is; that to a certain extent, nerves are more subject to Neuralgia as they approach nearer to the surface of the body: and I think that this will appear the fact to him who shall consider the cases as they may be collected, or as they have here been enumerated. With respect to this disease as it occurs in the face, this is very remarkable; and it seems to hold very generally, if with exceptions that will not materially detract from its value as a pathological observation. And if it be so, it is not very difficult of explanation: of that general

explanation at least which is as much as can be expected in the present state of our knowledge. It is partly a case depending on the same general fact by which it happens that Neuralgia is the result of positive injury to a nerve, and partly on the other well known fact that it is induced by exposure to cold. Both of these particulars are too obvious to need illustration at present : while this reasoning will aid in confirming the utility of a remedial process derived chiefly from experience, namely, of warm covering or an avoidance of the impression of cold on those nerves which are least protected from it by their situations in the body.

#### TOES.

In one instance I have met with a highly marked case of this nature in a toe, arising from, or connected with, an obscure intermittent accompanying a morbid spleen ; and, in another, I have seen a similar one, the produce of external injury. The latter, I must reserve to a future place. It is possible, that the recollections of many of my readers may enable them to add similar cases, not only to this one, but to such others among these Neuralgiæ, as, to myself, have been solitary. In the case in question, the pain itself was limited to the very end of the toe ; but, after some duration, an uneasy sensation, accompanied by numb-

ness, extended along the branch and trunk, even into the sciatic nerve at the hip; while, even when that extended pain had not come on, the patient felt a similar sensation on my attempting to trace the course of these with my finger, along the surface. The cure of this case proved somewhat difficult, though it was at length removed by the means already mentioned; and while for some time it increased in severity, it at length happened that the uneasiness and numbness, after reaching the hip, reappeared in the shoulder, passing down through the ulnar nerve, and affecting the end of the finger of the same side which corresponded with that toe, or the ring finger.

#### RECTUM.

OF this, one very well marked case has occurred to me; and it was one that I had an opportunity of studying very minutely, while, for a long time, compelled to maintain my own opinion against the universal one of, I may almost say, an army of medical men, who had, with myself, the opportunity of examining it. No one had supposed such a case possible, as, in truth, scarcely any one would, at that time, believe in any other Neuralgia than that of the face: and thus it is that blind habit and deficiency in philosophical reasoning form the great obstacles to scientific improvement. That the symptoms were attributed to organic

disease in the part, is what might have been expected: while gout was a solution that satisfied those who are always glad to find relief in this expedient, and while others, not an uncommon class, attributed the whole to a morbid imagination: a solution which, among medical men, has always been one of the readiest cloaks for imbecillity and ignorance. How often this modification has occurred, I cannot pretend to conjecture; but I can point out at least one other very minutely recorded case, quoted in the *Bibliothèque des Sciences Medicales*, tallying very nearly with that which I shall describe.

This case however, I must remark, is not so viewed by the narrator: being in fact not understood, and being related as a mysterious one, as is so common a practice under similar ignorance. It is not therefore described in the best manner; though, as it is very minutely detailed, any one, now, after the explanations of these disorders which I have given, will be enabled to see his way through it, and to arrive at the same conclusion; as every one, in fact, ought to have done long before, not less than the narrator himself; had such persons ever reasoned respecting Neuralgia, or been guided by other rules than those of empiricism, whether as to conclusions or practice. And if, well known as this work is, and often read as that case must have been, no one has

arrived at this conclusion, it is a sufficient proof, not merely that this particular mode of Neuralgia was not suspected, but that no reasoning has ever yet been exerted on the subject of that disorder, since it could not have failed to attract the attention which I am now directing to it.

I believe that it will be right here so far to depart from my general rule, as to describe the whole progress of this case, yet as briefly as possible, as a guide to practitioners; as I conjecture that it is by no means a very uncommon disease; and as it may, from the intricacy and variety of its symptoms, be really difficult to ascertain in some cases, even by a truly observing physician.

At the first attack, and for some weeks, it consisted in an occasional sensation like a spasm, apparently situated in the urethra, about the prostate gland; recurring three or four times a day, and causing little uneasiness. Gradually, these sensations increased in frequency, and were attended with a general sense of irritation about the neck of the bladder, very much increased by walking, and at length producing spasms in various parts, with a tendency to an hysterical paroxysm. No apparent fever of any kind was at first present; nor any suspicion of its real nature entertained; while the disorder, not yet strictly periodical, was referred to the urethra and bladder. Very shortly, there supervened a debility, with

occasional numbness, in one leg; and it was easy to trace, by the tingling sensation formerly described, the course of the fibular nerve. At the same time also, it was perceived that the mere act of bending the neck forwards, brought on the sensation in the perineum, and further, caused the patient to totter on the affected leg; a circumstance to which I shall have occasion to recur hereafter.

After enduring some weeks in this form, there supervened a febrile state, at first very obscure, but which was, after some time, ascertained to be a double quotidian with a nocturnal and diurnal paroxysm. Still, the nature and the real seat of the pain was obscure; nor was the slightest suspicion of Neuralgia entertained by the numerous medical attendants who in succession examined the case. Such however it appeared to me; and after some further progress, every doubt in my mind, if not in that of others, was removed by the increased regularity of the disease, and by the pain in question becoming as regular as the attacks of Neuralgia are when most perfect. In this state, the first of the quotidian paroxysms was simple, and the second was attended by the Neuralgia, which, now increasing in decision, increased also in severity. In this aggravated state also, it became plain that the primary seat of the pain was in the rectum; the patient describing it as a burning heat, as

from a heated solid introduced, which was shortly communicated to the bladder, producing irritation, and strangury. When of this severe nature, that irritation extended even round the thighs and over the lumbar region; so that the slightest touch produced great uneasiness, as happens in violent cases of the Neuralgia of the face, and was felt even in the abdomen, as if the whole colon was affected in a similar manner; which was probably the fact.

Further, during the severity of the attack, all the limbs were affected with spasms; and very generally there supervened a regular fit of hysteria, with a great degree of general derangement throughout the whole system, consisting of the usual symptoms of a severe remittent in all their worst forms. Lastly, and not to be unnecessarily minute, as the irritation of the bladder appeared to spread along the ureters to the kidneys, there came on diabetes, the diabetes mellitus; while, when this symptom was peculiarly severe, it was attended with an acute pain in the left, but not in the right kidney, so that possibly this particular symptom was confined to one of the glands only. And respecting this part of the disease, I must further add, that it was rigidly paroxysmal, or that the morbid secretion of sugar commenced with the general fit, and entirely disappeared in the interval.



Had I described this case, as cases are usually described, or with a more minute and regular detail of the symptoms as they actually occurred, it would have appeared infinitely more singular and obscure, as it would also have occupied many more pages; but viewing it as I have done, I have so classed and described the facts, as to render it intelligible, I trust, to any one, even to the most obstinate or sceptical. To a spectator, even to a medical one, it would have appeared still more inexplicable, than in even such a detailed description; from the extreme severity of the case, rarely perhaps exceeded by any disease in point of suffering, and, in particular, from the great distress produced by those collateral symptoms, which, as least essential and explanatory, though all belonging to Neuralgia and intermittent, I have passed slightly over. And thus, in fact, it did appear to all those who saw it with me, and could not contrive to analyze it into the same simple form.

The French case to which I have alluded, is in reality detailed in this very manner; so that while the narrator did not understand it, neither can perhaps his readers in general: as it might have been equally obscure to myself, but for the general views of Neuralgia which I had already formed. This is a circumstance, I may remark, of perpetual occurrence with respect to recorded

cases, and especially when of rare or obscure diseases; proving how often these might be cleared up by a proper description: while in testifying the deficiencies of the recorder, they also show the necessity, not merely of medical knowledge, but of those analytical and logical habits which are best acquired through the study of science in general, both physical and moral, and are scarcely to be acquired by any thing short of a wide range through the whole of those sciences whence alone the only real logic, that which I may venture to call the Logic of Facts, is to be attained. Thus must the philosopher, be he even not a physician, smile at that opinion, universal as it is, which determines that he who cultivates his own profession or science exclusively, is he who will understand it best, or who will alone understand it. As a Science, he will remain ignorant of it to the last hour of his existence: in his art, he will be an empiric or a trader; nor will he be a successful one, unless indeed as to his own ends, since, without the science, the art is helpless. And he will leave the world as others have left it before him, without adding one iota to the sum of knowledge; the useless, and, too generally, the exclusive possessor of facts and opportunities which he has been unable to turn to account: the exception to those different spirits, who, in universal science, have united to bring society out

of the animal and savage state to what it now is, and one of the exceptions, especially, to which it is owing that medical science is little other, to this hour, than it was in the very infancy of experience.

Now, lest it might be supposed that my own view of the nature of this case was biassed, particularly standing solitary as that did against a host, I may enumerate briefly the proofs, with such further additions as the progress of the case and the history of the patient furnish.

The person in question had been subject to intermittent, and to Neuralgia also, under various forms, habitually, or for a long course of years, and this was one of the relapses; a relapse however which was often afterwards repeated. Under those repetitions, further, it continued for many years, but with less severity; and on no occasion did the period of the attack and the continuance of the pain vary, by even half an hour, from those first established. And moreover, during this long progress, it was always attended by its double quotidian fever, and was intermixed with other neuralgic diseases, while further, re-excited by the causes of common intermittent. As to the proofs to be deduced from the history of the case already given, it is scarcely necessary to enforce the regular type of the fever, the regular recurrence and duration of the pain, the deter-

mined length of the relapses, always occupying periods of six weeks, the affections of other nerves in various places and under various forms, and the singular regularity of the diabetes which was produced by it. I may however add, that the cure of those relapses, or the shortening of their duration and the diminution of their severity, was effected by the remedies which succeed in Neuralgia and chronic intermittent, and that the disorder was similarly brought back by every debilitating cause.

From this description, I trust that this particular Neuralgia will be now recognised by any practitioner to whom it may occur; though it is to be expected that it will vary materially in its appearances, as the case in question was probably one of unexampled severity. In every Neuralgia of the simplest character, there are great variations, depending on the severity of the pain or local disease, on the force of the accompanying fever or its apparent absence, on the nature and regularity of the recurrences, and the reverse, and on other particulars which it would be superfluous to point out again. This is remarkably the case in the periodical headach as I have here described it; so much, indeed, that it has been sufficient to prevent practitioners hitherto from seeing that this disease was in reality but a mode of the Neuralgia of the face. It is easy

therefore to foresee, that in a part so entangled among others as is the organ in question, so highly and peculiarly sensible, not only abounding in nerves, but those immediately connected with some of the most sensible nerves in the whole body, and as is well known, peculiarly susceptible of pain, for obvious reasons, the modes and the extent of the pain may be endlessly varied; while the sympathetic affections, or the property which this disease has of temporarily extending itself to a distance from the part really affected, may cause appearances or sensations exceeding in variety and intricacy all those which occur in all the other Neuralgiæ united. Thus, as I have seen, it may put on, when slight, the character of a mere tenesmus, and be referred, as I am very confident it has often been, to internal hemorrhoids, or to strictures, leading to the pernicious and much abused practice of the bougie. Thus too have I much reason to believe that such pains have been sometimes, perhaps very often, referred to scirrhus: while the long duration of Neuralgia when a chronic disorder, would still further tend to confirm this erroneous judgment.

How important it therefore is that physicians should keep these facts in their mind in all cases of pains in these parts, it is unnecessary to say; since, while the only method of cure is now neglected,

every pernicious kind of mal-practice may be expected: and I have no reason to doubt that when practitioners shall be convinced, by the present remarks, of its existence and nature, it will prove to be a not very uncommon variety of Neuralgia. As to the modes of discriminating it, in any case, whether obscure or not, I could say nothing that would not be a repetition of what has so often come before the reader as to the whole of the disorders treated in this essay. It will require a discriminating observation; but even that must be preceded by a just theory, by a conviction of the real nature of the several disorders here discussed, and by those habits of analogical reasoning which cannot be too strongly inculcated, since, without them, all physic must ever be empiricism, and can be nothing better.

I have little to add respecting this particular variety, but that its seat appears to be in the minutest ramifications of the nerves, as in the diffused headach; a conclusion drawn from the similarly diffused nature of the pain. That, in the case recorded, it was spread to such distances, may perhaps be attributed to the highly nervous and intricately communicating nature of these parts: and with respect to the affections of the larger branches, there are parallel cases innumerable in other Neuralgiæ, of which I have de-

scribed one sufficiently remarkable, in the preceding account of this disease in a toe.

#### THIGH.

THE only reason for pointing out this situation is, that I may add to the number of the places or nerves which I have myself known affected by Neuralgia; as, in the cases which I have seen, the disease was remarkably precise with respect to the quality of the pain, and exactly resembling the Neuralgia (Tic) of the face, in severity and manner. Yet these cases allow me to make a remark which was not perhaps sufficiently enforced in treating of the Neuralgia of the face. It is, that in this nerve and its immediate ramifications, in most of the cases which I have seen, there was no permanent or moderate and diffused pain, but that the whole disorder consisted of those shocks which I formerly described, occurring at very irregular intervals throughout the day. Thus the physicians who had examined the cases before me, could not be convinced of their periodical nature, nor believe that they bore any relation to intermittent, or even to Neuralgia. Yet, in all, the patients had suffered from the chronic disease of this nature, while some had also experienced other Neuralgiæ. And further, a careful investigation also showed this

fact, though it required much cross-examination to elicit it from the patient ; namely, that however irregular the recurrences of the pains were, there was always one portion of the twenty-four hours where they never occurred, and that this healthy period was always the same. Thus, in practice, a patient may feel one, or two, or twenty, or fifty shocks in the day ; but, be the number what they may, they belong to a period, which is in reality that of the paroxysm, while at least the physiognomical mark of the cold fit will be found to forerun them, should no other criterion of a fever be easily discernible.

This happens also, in some cases, in the Neuralgia (Tic) of the face ; where it has equally led physicians to deny the paroxysmal and periodical nature of the disease : an error too the more obstinate, when, as in all very old and chronic cases, the pains become so irregular as to occupy only one day or two, and then to be absent for a long time. This class of cases has, nevertheless, its perfect resemblance in the commonest chronic intermittent ; where, often a long duration, and in a disease which has, in a certain sense, been cured, a single fit will often be brought on by some assignable, or some unobserved, exciting cause, appearing sometimes even in great severity, yet not followed by any others. We must consider all these, in Neuralgia and inter-



mittent fever alike, as cases where the habit alone is no longer a sufficient or an accessory cause, and where also, while the application of a fresh one is required, that has no longer the power to bring on the whole train which it once did, or to re-establish the habit of the disease.

As the initial term which I have adopted for this division is but a popular and lax one, I must now specify anatomically, the real seat of the disorder; and if, throughout this chapter, I have followed the same loose arrangement, it is chiefly because I had not a sufficient number of cases to render it worth my while to make an anatomical one: while, moreover, if it would savour somewhat of pedantry, (a small pedantry far too common, as if any man could not make himself master of the human anatomy in a few weeks, as well as of any other tangible and demonstrable substances;) it would not be a mode of arrangement very easily adhered to; since, where the disorder is seated in the smaller or minuter ramifications, the most pedantic anatomist would be unable to assign its exact claims.

With respect to the exact seat therefore, in the cases of this variety which I have seen, I must add that it has occurred in different individuals, in the anterior crural nerve; in the trunk, at the exact flexure of the thigh, and in its ramifications, as low as the middle of the limb; in

the former case, shooting as sciatica does, and with similar severity, down even to the toe.

In these cases indeed, and in one very remarkably, which, under various recurrences and with some neglect on the part both of patient and practitioner, united to a deep-seated and inveterate constitutional disease, proved extremely obstinate, lasting, under some vacillations, more than a twelvemonth, the disorder was, in every symptom, a sciatica; only, as might be said in vulgar language, in the wrong place. And as the nerve in question, at this point, is of a large size, it is easy to comprehend how the resemblance should have arisen. And in another of these cases, where the disease was similarly at the flexure of the thigh, it proved extremely troublesome: recurring during many years, sometimes superseding another Neuralgia, at other times accompanying a marked intermittent of no small severity, while removed either by the usual remedies, or by change of place, or by the supervention of some other mode of the disease. In those cases where the pains had occurred at a lower point in the thigh, the quality of the pain varied proportionally; while the accompanying circumstances were similar, and the effects of the remedies also. I have only to add, that while such cases must assuredly have occurred to others as well as myself, I can find no account of

them ; so that those who have seen them must be at the trouble of recollecting whether they sought for the solution in gout or rheumatism, since they assuredly would not have sought it in sciatica.

#### KIDNEY.

I HAVE, in another place, described an affection of this gland, of a neuralgic character, attended by diabetes. It is awkward to separate the present variety, but in the arrangement which I have adopted it seemed unavoidable, as it was a case of pure pain, apparently in this organ. I have met but with one instance of this Neuralgia, or at least of such pain in this precise spot, but I shall be surprised if it does not, at some future day, prove sufficiently common ; since superficial observers can so easily account for it by gravel, inflammation, or any other convenient term. Nothing could be better marked than this case, in all the accessory symptoms ; that it had been mistaken I need scarcely say. I have said, the kidney hesitatingly ; because there was no increase of urine ; no diabetes, as in the other case hereafter noticed : so that it might possibly have been seated in the trunk of the renal nerve without affecting the secretory branches, or, for aught that can be known, in the ureter, or even in some other nervous branch in this neighbourhood.

## CHAPTER V.

*On Sciatica.*

IF I have thus terminated a chapter, the limited extent of which, as to the heads it includes, is most certainly the consequence of my want of further experience, since I cannot but suppose that it will hereafter be far more widely extended, I should not have ended it without including in it that subject and disease which I have reserved for a separate one, since according to my own views, it is but a variety under this general species, had I not thought it expedient to follow the habitual usages of physic. And it is perhaps best thus ; while it is in conformity to what I have done with respect to some other disorders, and adopted for the same reason. It does not appear so utterly to prejudge the question : and moreover, it is perhaps a politic proceeding as to the wished-for effect : since it will make more impression to see sciatica treated with the respect which it has, sometimes at least, received from physic, than to have found it amalgamated with a variety of disorders which have hitherto attracted little or no notice, and which, above all,

have not acquired that honour which, in physic, is every thing, the honour of being distinguished by a Name.

It would be superfluous to describe a disorder so well known and so often described as this is ; being the Neuralgia, above all others, which has attracted the attention of physic, almost from the earliest periods. Why it should thus have excited attention, may perhaps be explained, from its extreme severity as a painful disease, and from the very remarkable place which it occupies. And why it has not been considered a Neuralgia, a mere variety in an extensive genus of diseases, may perhaps also be, partly at least, explained, by its having, in consequence of this conspicuity, gained a distinct name for itself. Such is the overwhelming influence of terms, in misleading, and in prolonging error ; at least among those to whom terms are every thing, the substitutes for ideas, instead of their representatives.

But this is not all ; while few disorders afford an ampler proof of the laxity of medical reasoning, or rather of the want of scientific investigation which has so prevailed in physic, from its infancy down to the very hour at which I am writing. This it is that has retarded, or rather, impeded, the progress of that science ; in which we trace little but a succession or a mixture of empiricism and hypothesis : while it is with little justice,

surely, that physicians exclaim against difficulties, thus attempting to justify the imperfections of which they complain, or thus desiring to excuse their own deficiencies, when they have not applied the instruments and proceedings of science to their art, when, on bad observations or imaginary ones, they have engrafted even worse reasoning; if indeed they can often prove that they have reasoned at all. Universal science might equally have complained of insurmountable difficulties, had its cultivators, in any department, acted as Physicians have done: and this day would now see, in Astronomy and Chemistry, such progress as physic has made since the days of its cradle in the hands of Hippocrates or Galen.

And if I have said that this disease offers an illustration of what the procedures of Physic as a science have been, it is a simple one which all can apprehend, and therefore the more useful: while as far as it may include a satire on that science and its cultivators, the truth is such as to justify these remarks. And if on this one point before us, selected by a mere hazard out of the whole Nosology, the investigation and application of a simple general principle has elucidated in a moment, (as I trust and believe is the fact,) that disorder which has been a standing opprobrium to Physic since observation first commenced, then are there hopes, that, from similar proceedings,

in future and better hands, and as to other portions of this mass of present obscurity, other and similar lights will be thrown on other subjects, and that at some future day, Physic will be enabled really to take its rank among the sciences, with consequences as to human happiness which it is easy to anticipate.

To prove that what I have here said is true, I need not surely investigate the past history of opinions as to Sciatica, even down to the days of Cullen (and later I need not note those) since that is well known to all my readers. He, like others, ranks it with Rheumatism; and I select him, not to censure *him*, but because, as a systematic writer, a public teacher, and a recent author, he is the representative of Medical opinions. Why was it ranked with Rheumatism? because it was a painful disorder: such are the reasoning processes of physic, yet it complains of difficulties. And what is Rheumatism? a painful disease also; "a peculiar affection," says Cullen, "of the muscular fibres, with an inflammatory disposition in the system at large."

If by such a road, sciatica was to be investigated, if this is the road by which physic proceeds, as it has proceeded, have we any reason to be surprised that this disease remained unknown, and that physic is what we find it? not merely that Neuralgia remained to be investigated to this

hour. It is pardonable to feel indignant when the science to which we have especially attached ourselves is thus treated, and still more, when we reflect on the consequences of such a procedure. And even when the author whom I have cited as the organ of opinions does thus class this disorder, he passes it over as if unworthy of regard, proving further that he looked on it but as a variety; while the universal practice, common to this with all rheumatism, proves that this also was the general opinion, even had that not been otherwise capable of proof.

Yet it was discovered, and long ago, by some observers of more acuteness, that sciatica was seated in the nerve, at least occasionally. This however led to no results, far less to that generalization which it ought long since to have done: and how little it effected, is still proved by the same high authority, when he treats with neglect the opinion and its author. And still, if that opinion has recently spread, if, as was long ago obvious, as ought always to have been plain, the nerve is always the seat, and the true seat, of this pain, if it is in no sense a rheumatism as that disorder has always been apprehended, (though, if in some measure classed with it under the present views, it is so under entirely new ones,) no general law has been laid down respecting it, nor has it been viewed as what it truly is, the Neuralgia, or, to



use this popular term, the *Tic douloureux* in the sciatic nerve. Yet such it is, and such its theory and its place in the system.

Let us now reverse the case, and see how, while its theory has been derived from the Neuralgia of the face, the theory of this, and indeed the whole theory of Neuralgia, ought long since to have been derived from sciatica. Had it been seen, even by Cullen, that it was a disease of the nerve alone, that it was a Neuralgia, and had it been merely inferred or suspected that, if one nerve could be thus diseased so might another, had the very simplest process of reasoning been adopted to conclude that any nerve might be affected as the sciatic nerve is in this case, or had the disorder been made generic instead of special, and had, still further, the term Neuralgia, or any term, been applied to it as a general and generic one, it is scarcely possible but that the whole of the Neuralgiæ should long ere now have taken that place in a nosology which is so amply their due, and which it is so important that they should at length possess.

Or, to make this remark more simply, if sciatica has been ranked as a variety of rheumatism, it is but one instance of many, of that laxity which I have been censuring; influencing, not merely ordinary observers, but nosologists under the professed guidance of philosophy and logic;

a laxity which, satisfied with a symptom, neglected to inquire of causes; and to which, even pain, the least characteristic of all symptoms, was evidence enough of similarity or identity. And if it is true that a few better observers had determined that the seat of the pain was, in this case, the nerve itself, and not, as in rheumatism and its analogies, the muscular or membranous parts, that conviction has not been solid, or rather, is not so universally solid and complete as it ought to be, even at this day, while it is not general, in any mode. And if this assertion were doubted, the proof would be found in the nature of the practice in this disorder, and in the complete wavering or laxity by which it is characterized, even in the hands of those who feel a sort of belief, I cannot call it a conviction, that the nerve itself is the real seat of the disease.

Undoubtedly, when I look into ancient and foreign authors, I find occasional notices of sciatica attending intermittent fever or following it, and of the same disease having periodical returns with or without intermittent; as I even find cases, for one of which I may quote Werlhoff, where bark had been administered successfully, and on those very grounds. But I cannot discover that these have been considered as aught but incidental facts; nor, even when the disorder is referred to the nerve itself, that it has been viewed as a

real Neuralgia, still less that it has been ever treated, otherwise than experimentally or empirically, by the remedies of that disease. I need scarcely refer to the systematic writers for the proof of this, when Cullen hardly condescends, as I have just remarked, to notice the sciatica, even when he treats of it under rheumatism, and when he almost seems to sneer at Cotunnius for his opinions respecting an *Ischias nervosa*.

But if it is time to terminate a criticism on what is past, I must persist in thinking that such criticism is not only justifiable, but necessary and useful; while it is in reality a criticism on the science itself; or, if on its cultivators, on those as impersonal beings, or philosophical and abstract entities, not as individuals who have lived or may now be alive. Science and its history cannot be examined, for good or evil, without a reference to those agents by whom, for good or evil, it is pursued; but if, when we have to allot praise, we gladly identify the *Ens* with the Titus or Marcus by whom it has been merited, we as gladly suppress, reversely, the names of those by whom it has not been deserved, as far as that can be attained. Unfortunately however, where no individual is selected for blame, all feel it as if it were directed to themselves; while an unfortunate sensitiveness on the part of those who profess physic, arising obviously from its trading

quality, renders this impression much more general, and, as to the critic, much more disagreeable, than it would be in any case where deficiency in science did not also imply a deficiency in the right or claims to profit; or, as it is felt, tend to produce some hazard of failure or diminution in this essential point.

To proceed with the history of the disease as far as I need enter on it: while the characters of sciatica show that it is one of the Neuralgiæ, so does it prove to be the most severe of its tribe. It is in fact so like to the variety last described in particular, even in its situation, that it is a matter of wonder how its real place and nature were not determined from the very commencement; unless indeed the similar affection of that nerve had escaped notice altogether, which is scarcely possible. That its analogy to the Neuralgia of the face, or the analogy, reversely, of that Neuralgia to sciatica, was not long ago seen, can be accounted for, as I have said, only by that oversight or ignorance which could suppose the *place* of a pain sufficient to constitute a disease, and a genus, or species. That the opinion which I would here confirm, has however been entertained lately by a few individuals, I have already admitted; but as long as the entire theory of Neuralgia remains unknown, while the whole of these diseases are not generalized under one lead-

ing principle, so to believe is only to add one empirical fact to another, without making any real progress in knowledge. And moreover, while cases of Neuralgia are often conceived to consist in inflammation of the nerve, using that term in its ordinary sense, the effect is as bad as the theory is unfounded, since it can only lead to wrong practice; while it is sufficient to examine the present practice, even in proceeding on that somewhat improved view, to be convinced that nothing has been gained; as is the inevitable consequence where a theory is imperfect, or, as in this case, still false, inasmuch as it is imperfect.

It is on this view of its nature, that we can explain the peculiar intensity of the pain; a pain, both for quality and violence, bearing no resemblance to that of rheumatism. On this view also, we can explain its confined nature, the absence of inflammation, the state of diffused irritation about the parts which attends the fit of pain, the shocks which accompany it, resembling those of all the Neuralgiæ, and its propagation along the course of the nerve. And if these peculiarities are thus explained, so are they the proofs of its real nature; while similar and further proofs are found in the paralytic affection which so often follows it, and which, as I have

already shown and shall more fully show hereafter, is a frequent consequence in all Neuralgiæ, particularly under bad or wrong treatment. If spasms in the adjoining muscles, or throughout the body in general occur in sciatica, so do they in all the Neuralgiæ; and it is further remarkable that it produces, in irritable habits especially, hysterical symptoms, as do the other disorders of this nature, together with a general irritability, both of mind and body, which seems to belong peculiarly to the painful diseases of this nature.

It is further remarked that the pain of sciatica "breaks down the constitution;" or that there is a state of general disorder, in the chronic cases especially, which is scarcely produced by any chronic painful disease, not even by gout and stone. This is the condition or change to which I formerly alluded and shall have occasion to allude again, and the cause of which I then explained; a condition which attends all the Neuralgiæ without exception, when of long continuance. If other proofs of similarity or identity were required, they would be found in its inveterate duration when once established; an inveteracy which has rendered it an incurable disease, similar to the inability of the mischievous effects of blood-letting and local applications in its

apparently voluntary cessation on change of place or of habits, and in other circumstances, attending the remedies for good and evil, which I need not again repeat, often as they have been discussed for the parallel cases.

It will be objected by those who are averse to this view of Sciatica, that it is not so strictly periodical as this theory would demand. I believe that this objection can be satisfactorily answered, on the grounds already so often stated as to all the Neuralgiæ; and further, that whoever shall commence by believing this theory to be true, or even supposing that it is possibly so, will be at no loss in confirming it by observation. Sciatica has not been supposed an intermittent disease, and therefore its paroxysms have not been sought for; while their obscurity, or imperfections, already accounted for in all the Neuralgiæ, have countenanced that prejudice or carelessness which so pervades all practice, in that which is a trade, in reality, much more than it is a Science.

But in fact this regularity is not only a very common occurrence, but as I commenced by remarking, there are many cases of rigidly periodical and intermittent sciatica on record, of which there is at least one familiarly known, in the *Edinburgh Medical Essays*. And when I further find that even an acute medical friend, residing where this dis-

order is endemic, now constantly observes this character, which, till it was pointed out to him, he had overlooked, or in fact had never once perceived, when he now seldom fails to discover also the intermittent fever, even regular, when he finds it to connect itself, as to the place of its endemic occurrence, with Neuralgia of the face, sometimes also occurring together with that in the same patient ; when further he writes to me, that since he adopted arsenic at my suggestion he seldom fails to cure it, and lastly, when we know that in the ancient cases, change of place or air is the best remedy, I can scarcely believe but that when these opinions shall become more universally spread, I shall see the same testimonies from many other quarters, and that this most painful disorder will no longer be that opprobrium to physic which it so long has been.

In fact, if the absolute paroxysmal and intermittent character of Sciatica is not frequent, it seldom happens that a distinct exacerbation is not to be found ; while this is generally overlooked, in consequence of the very vulgar philosophy of the patient's "becoming worse when he is warm in bed." That is to say, this is a nocturnal paroxysm : and when he is not "worse in bed," as happens not less often, the paroxysm is diurnal. But it would be mere repetition to explain all these variations or anomalies ; since whatever I have



said on that head respecting Neuralgiæ and also intermittent, belongs equally to Sciatica, and can be explained on the very same grounds. And thus also is it explained, how the disease varies in its mode, appearances, or intensity, as it is recent or habitual, acute or chronic; as we equally explain how it occurs in relapses of a certain duration, with intervals, and how, in old cases, single fits will be brought on by an occasional cause; all of them facts occurring in intermittents and in Neuralgiæ, under the same circumstances.

I know not what fortune others may have had as to this disease, though I am inclined to suspect, that, from being solely occupied by the pain and prepossessed with a wrong notion of its nature, practitioners in general have neglected what I have never failed to find, namely the intermittent febrile paroxysm, under all the characters or variations which attend it in Neuralgia in general. And I believe that this may always be found when it is sought; provided of course that the physician has the means, or makes the opportunity, of watching the disease as it ought to be watched for this purpose.

Thus does it appear to me that the character of sciatica is perfectly established as a Neuralgia, or as coming under the division of local or neuralgic Intermittent; and how important this view is, as to the practice in this disorder, a

practice which has hitherto disgraced physic by its failures, I need not say. I do not mean at the same time to assert, what in fact I do not suppose, that it is necessarily the produce of Malaria; because I have already shown that the other Neuralgiæ appear to arise often from simpler causes, and are assuredly the produce of even local injury in some cases. If in attempting to ascertain what the common nature of any diseases may be, or in arranging any number of varieties under one common genus, or even one common proximate cause, we are to be called upon to find a common remote or exciting cause, this is not the only case, by many, in which we should have to dispute our way through nosological arrangements. Even simple intermittent may, for aught that we yet know, have more causes than Malaria, and it is, perhaps, even probable that it has; and thus may the Neuralgiæ, and the sciatica among them, be the produce of mere cold or damp, as the latter disease has been commonly supposed to be.

But let me add a word on this point, since I may as well provide for the criticisms to come, by showing that I know them already, by anticipation, and that, whatever they may be, I have considered their value, and have not written one line without keeping them always in my view. This is at least sufficient to prove that I do not

consider them available ; and I may as well therefore answer this one now as hereafter. It is said, that, from the habit of contemplating Malaria, I see in it the cause of more diseases than it does or can produce. The answer is, that the evidence is adduced ; and upon an investigation of the value of that evidence must others decide, as I have done. Let them so decide, after proving that the evidence is insufficient ; and having thus proved that I am not right, it shall be admitted : but to all conclusions that do not derive from the examination of evidence, he who is accustomed to guide himself by that, turns a deaf ear. When electricity became first known, its early cultivators held it forth as the solution for all physical difficulties, as the cause of all phenomena. This was an induction before evidence, and they were ridiculed. That probably would have happened had there even been evidence, supposing it imperfect. Yet it has now been proved that this power is deeply concerned in chemical composition, in magnetism, in meteorology ; and the day is probably not very distant when the anticipations will be fulfilled, and the ridicule become a subject of shame.

But, to return, while a good deal has been proved, I have not the slightest desire to assume more : and the truth is, that if we have much yet to learn on this subject, we must not suffer

our ignorance in one or two points to become an excuse for persevering in ignorance or obstinacy as to others, where knowledge, a modified knowledge, which is better than none at all, is attainable. To have ascertained the generic community or analogy between any number of diseases, is useful knowledge; to have ascertained that the proximate cause of these is a common one, is also useful knowledge, though we may not be able to define what that pathological condition is; and if the remoter causes, or the circumstances which induce that pathological condition are but partially known, it is, even then, a step in knowledge: but it would be highly presumptuous to suppose that these were exclusive, greatly ignorant as we are in all the philosophy of this most intricate branch of natural history; nor do I desire to assign to Malaria one tittle more of power in this respect than it shall be proved to possess.

If it is not my design to pursue further the history of a disorder so well known, when my only object was to produce the proofs of its belonging to the class of diseases under consideration, there is one fact respecting sciatica which seems well ascertained, and which, if it leads to no conclusion now, may become of use hereafter when this class of disorders shall have been better understood and studied. It is observed to be

peculiar, in a general way, to certain situations, or to be a sort of endemic, in those, while little known in others; and thus for example, it is extremely common in Cumberland and Westmoreland, among the peasantry. It is a singular analogy to this, that, in a certain district in Wales, the Neuralgia of the face should be the common form of the disease, while the sciatica is, comparatively, little known; but how much further such facts may extend, we have as yet no information; and for the plain reason, that we have had no observers and no philosophy. I do not pretend even to imagine a cause; but, if it is of any value, or rather if it may ultimately be of any value when our knowledge of these diseases shall become more extensive, there is something similar to this in the common intermittent, as I formerly observed; since there are certain situations which produce quotidian, or tertian, or quartan, in preference, respectively, to the other forms. And if what I have attempted to prove in another place be true, namely that the enlargement of the Thyroid gland is caused especially by the Malaria of alpine valleys, here is another fact and an analogy, seeming to prove that there are distinct modes of Malaria productive of distinct disorders: facts which even insulated and obscure as they may be, we have no right to reject, any more than the limitations of the range of

Malaria, merely because we cannot explain them. To make our ignorance the measure of truth, is to establish a philosophy which had it existed at the beginning of the world, would have now found us on a level with the animal men of New Holland. A much larger collection of observations may possibly hereafter throw light, not only on the causes of these variations, but on the nature of Malaria in general: but the subject must be pursued in a far other manner, and I fear, by other persons, than it has yet been.

As to the cure of sciatica, I might here, it is true, discuss the practice recommended in medical books, and consider how far they are useful or mischievous; as I should have done, had this been intended for a full history of a distinct disease. But as the greater part of such an examination must be necessarily entered on in treating of the cure of Neuralgiæ in general, the consequence would be a repetition which ought to be avoided; while it will be easy, should it in reality prove necessary, in this, as in other local cases, to make such particular allusions under the head of the general cure, as each specific variety may demand.

## CHAPTER VI.

*On Questionable Neuralgiæ.*

I HAVE now gone through all those Neuralgiæ or affections of nerves, consistings of pure pain without inflammation, and produced without external injury, which have come under my own observation, with the exception of toothach; which I am compelled to defer to a later section, from unwillingness to separate the cases of this nature from those where the cause can be traced to local injury; thus making two divisions of a disease so familiar and so long known by one term.

But I have still to notice some painful affections which may throw light on this disease, or may be assignable to the same cause; while the remarks are offered only as suggestions for future inquiry; being facts which, from their rarity and obscurity and from their doubtful nature, or, from the imperfection of their evidences, I could not place in the former list, and do not choose to pass entirely over. I feel no ambition to overstep, even by a hair's breadth, the bounds of evidence; having never discovered

that either pleasure could, or fame ought to accrue from the talent of invention in matters of philosophy, or from applying the imagination to what belongs to the province of cold reason.

I had occasion formerly to suggest that lumbago might often be a neuralgic pain; though perfectly ready to believe that it is also a rheumatic affection, in the usual sense of that term; while I related an instance of its alternating with the common Neuralgia of the face, which could leave no doubt on that subject. There appears no reason to question the possibility at least of this, as a matter of theory; considering the nervous anatomy of that part of the body, and the analogous cases in which it has been proved that the pain of Neuralgia exists over a great space, and in a comparatively mild form, from being seated in the minute ramifications of the nerves. But whatever may be judged of this opinion, I have met with cases where it was impossible to entertain a doubt; from its occurring as a transient and periodical, though severe pain, alternating with other neuralgic disorders, and in a patient suffering under habitual intermittent. Whether that pain of the loins occurring in fevers is not an affection of the same nature, is a question formerly noticed, rather of curiosity than use indeed, which may remain for future consideration.



There is a well known pain of the stomach, which has obtained no name as a disease, common as it is, unless the term *Gastrodynia* may suit it: and which therefore I know not how to describe, otherwise than by saying that it resembles the particular pain produced by honey, in those persons with whom this substance disagrees. It is enumerated among the nervous symptoms, in authors who have treated of this subject, and among those of *dyspepsia*; but it is very certain that it often occurs where no *dyspepsia* is present. The most remarkable particular connected with it is, that it is very generally chronic, or that persons once materially subject to it are also subject to recurrences; that it comes on without apparent causes, or at least without the use of improper food; that it is scarcely relieved by any remedies, rather holding on its natural course, and, wherever it is habitual, lasts a definite number of hours. In these particulars, it appears to have an affinity to the *Neuralgiæ*, though I should scarcely have thought of suggesting this possibility, had I not known one case where it did occur in a patient subject to chronic intermittent, and did replace, repeatedly, another decided *Neuralgia*, in alternations more or less regular; while it also maintained the same exact periods of recurrence and duration.

And when, in another case, and that in a

young person, I knew it to continue for three years, returning regularly at three o'clock in the morning and lasting two hours, yet, during this long period, occasionally ceasing for a week or two, as chronic intermittent or Neuralgia does, while also invariably removed for a time by change of place, and when this patient, before that time, and after it, had suffered from quotidian ague, and from quotidian toothach, also recurring at that same precise hour, I really know not to what other solution I can resort, though I willingly leave that to any one who can give a more rational explanation. But I gladly indeed leave this obscure disorder as a subject for future inquiry; becoming more timid the further I proceed.

I have just read, in a recent foreign journal, (French,) a reported case of inflammation of the spinal marrow. It is very ill reported, as it appears to have been ill observed; and I entertain little doubt that it was a case of Neuralgia, under some of those modifications, the nature of which must remain a mystery as long as we continue ignorant of the real, pathological, change which the nerve undergoes in these disorders. To suppose indeed that the whole body of this great nerve could be affected to the degree in which the sciatic nerve is in sciatica, would be to suppose a disease which we should probably have little

opportunity of studying, and which has, probably also, never occurred. But it is easy to imagine a minor degree of the same disturbance or derangement, capable of producing all the symptoms described in the case in question ; while any misrepresentation, should such exist in that, or in any other cases, would be easily explained by the practitioner's absorbing or fashionable theory respecting inflammation, and still more respecting its remedies, and by his ignorance as to the nature and extent of Neuralgia. And that such a disease actually does exist, is proved by that case of the Neuralgia of the rectum already related ; in which the affection of the spinal marrow was unquestionably situated near its origin, or extended so far ; while it is quite easy to imagine a greater degree of the same disorder in this primary nerve, and without the presence of such local affection as this. That, in the case in question, this great nerve was really affected in some local manner, and at the point just mentioned, was proved by the consequences produced on bending the neck ; of which, the instant result was a sudden irritation in the perineum and bladder, with a loss of power in the legs, and chiefly in the left, (of which one nerve was particularly affected,) so great as to cause the patient to stagger and to be in imminent danger of falling.

Such cases are probably very rare ; and yet we

can never know what is rare or common, till it has been described: since, through all nature, every thing, every substance, has been once rare, as, once, it was not supposed to exist; while the effect of description is to render it, very generally, common, sometimes even to familiarity. Chemistry and mineralogy abound with proofs of this fact; and I formerly insinuated, that, in the very subject under review, the same has been true of Neuralgia. And in physic generally, it is a mere dogma that the lower classes and the savage or unimproved tribes of mankind are subject to fewer diseases than the reverse divisions; while it has seldom been asked whether, in such instances, there are observers present to note the disorders that do occur. If luxury and physicians are accused of making diseases, it is not for me absolutely to deny the assertion: but the greater truth would be, that the diseases of the opulent and the cultivated seek for attention and find observers.

But to pass from these general remarks, should record, example, fashion, or what not, render a belief in the inflammation of the spinal marrow, described by the French author in question, general, and symptoms occur to justify the presumed presence of such a disease, the facts which I have here stated and the suggestions which I have made, will be of some value; because it is proba-

ble that the importance of the affected part would lead to a partially active interference of that system of imagined remedy, evacuation, which, in all these cases, is as fatal as it is active, and which is destructive in proportion to its activity.

Yet I cannot quit this subject without reminding the reader, that the same theory and the same term have been applied to the ordinary Neuralgia of nerves ; guiding also the practice, and, as I have remarked where I notice that fact hereafter, misleading it. The one case, as I there observe, illustrates the other : and it is not difficult to see how extensively evil would follow from the adoption of such a general theory, as partial evils inevitably must, whenever a nerve, thus pained or affected, is presumed to be in a state of ordinary inflammation. That the condition of the nerve during the painful stage does resemble that of inflammation, I have fully shown : but it has equally been shown also, that it requires a very different set of remedies from those by which this general affection, in its ordinary sense, is vanquished.

It is rather a matter of curiosity than use, to suggest that the acute, sudden and transitory pains so well known as occurring in various parts of the body, are Neuralgic, whatever their causes may be. As far as sensation can decide such a question, those who have felt any of the pains of

a real Neuralgia, will at least pronounce that such flying pains have the same seat, or are situated in a nerve; and if it can add any thing to this supposition, those pains will be found to occur frequently in persons who have been subject to Neuralgia, particularly when that has affected more nerves than one.

To add to these doubtful or yet unascertained cases, if I have found many more records of painful and unexplained diseases than I choose to quote as probable instances of Neuralgia, there is one that I cannot pass over, though I cannot prove my suspicion to be well founded. This is the ear-ach, or otalgia of systematic writers, abounding in some cases which are marvellous and more which are obscure: while when durable, and otherwise inexplicable, they are often attributed to worms or insects in the ear, whether these could be extracted and proved or not; just as the Neuralgiæ of the face have been so often assigned to similar causes in the frontal or other cavities.

I may however terminate these suggestions as to what I have termed questionable Neuralgiæ. If they are of little practical importance, if even, as mere speculations of theory, they should be thought unfounded, they will not be without their use. I wish it to be clearly understood, that I am very far indeed from supposing that I

have enumerated all, perhaps not one-tenth, of the nerves or places where even a definite Neuralgia may occur, and far less all the troublesome or obscure forms which these disorders may put on. It was a new subject when I undertook it; and if it is now admitted that Neuralgia is found in many other nerves than those of the face, the perpetual occurrence in authors, of cases of this nature, represented as mysterious or explained on some other grounds, together with the very limited number of practitioners out of the whole mass who seem to be aware of it, prove that such knowledge, even to this moderate extent, is as yet very little diffused. This investigation therefore, imperfect as it may be, has been a contest with difficulties, and with what is much more painful, opinions, and prejudices. What has been even more productive of obstruction, it has been cramped by limited opportunities of personal observation, and by that perpetual source of vexation to him who is in pursuit of truth, the difficulty of understanding, or of extracting that truth from recorded cases, where the narrator, with even the best faith, has viewed them under a prejudice or a false theory. To have suggested therefore the possible cases of this disorder which I have noticed in this section, will probably lead others to look back on what I may have actually demonstrated, as a mere sketch, a work barely

commenced; to establish, further, the principles and leading facts in their minds, and keeping them steadily in view, to apply them to the solution of such difficult cases of painful or peculiar diseases as may occur in their practice, or to those disorders where error as to the real nature is possible, and where that error would lead to serious evil consequences.

Of cases which have not occurred to myself, of Neuralgiæ in other parts of the body than the face, I find only the few following noticed by different authors: but I could probably have increased the list, had I chosen to search more widely, or ventured to explain in this manner, peculiar cases of painful diseases which the narrators had not understood. The latter is a hazardous, and not always a very just proceeding: and I know not, that, to have extended the list in this manner, would have been of any advantage, when I have shown that this disease may occur any where, and when I have drawn from my own observations what, I trust, will prove satisfactory on this point. To have introduced disputable cases, might have tended to throw discredit on what is proved.

Dr. Alderson relates a case, where one breast (mamma) was so affected; and there is one in Swan, where the disorder is said to have been seated in the second cervical nerve, extending to the ear and face. A case of Dr. Pearson's, where



the thumb was affected, scarcely differs from those occurring in my own practice, in the fingers.

Among cases described by authors, similar to those which I have myself observed, I shall be content with naming the following. In the thigh and leg by Hall; in the arm by Pearson and by Swan; in a finger by Abernethy; and in the leg and thigh by Yeatts: while I cannot help remarking that so confined a record of such cases from so many persons in extensive practice, and from others who have written, even exclusively, on this disorder, compared to those which have occurred to myself in a very confined range, will almost prove that the Neuralgia under these forms has been misunderstood, or mistaken for other disorders, as, from many of the cases of peculiar affections, is most evident: and most probably for want of just views respecting the nature of this disease.

Nor ought I to pass from those remarks on the cases which I have thus borrowed, without an observation which, if in some degree made before, is really so important as it concerns the present attempt to establish this disease, Neuralgia, as meriting a distinguished and generic place in nosology, that it requires to be made more pointedly. That it is impossible but that it should have always existed, seems too plain to require proof; while what I have already brought forward in evidence does

in reality prove that to have been the case. Yet if we except sciatica, known from the earliest times, the very modern notice of André is the first account of a variety no less conspicuous and painful; while from the moment of its announcement, it has been discovered to be a very common disorder; unknown, or rather, unmarked as it had been before. Still, if we except this particular variety, it is but within a few years that any others have been noticed, or even suspected; while Cullen, though following Sauvages, who had thus far borrowed from André, takes no notice whatever even of that one in his *System of Practice*. And in foreign writings, systematical or otherwise, universally, if we can find cases which may thus be interpreted, we see clearly, that while related as obscure diseases, none but such marked cases have been selected, and so selected because they were obscure; though it is certain that, in particular, in the pestiferous districts of France and Italy, as elsewhere, they must be common: common as in India and Persia, where also they would never have been noticed but for the publications on this disorder of the Face. And what has been true, is still true. The Neuralgia of the face is indeed so far rescued from obscurity; but the work was but commenced, as long as its connections and nature remained unknown, or while its theory was groundless, false, or obscure. But all else, all that con-

cerns other varieties, remains as obscure as before; and the proof has been just given, as indeed it has appeared throughout: since, had it been otherwise, I should have been able to adduce hundreds of cases in the place of three or four which I have with difficulty found.

What then must have been the mass of suffering? and all for want of a name and a place: for want of the definition and explanation of a common disease, neglected because it was not described, maltreated because not understood. Let others now draw the conclusion which I need not, as to the present attempt; and be convinced, that, in physic as in all else, nothing is known to exist till it has been described and received a Name.

I have now a few general remarks to add respecting these painful or proper Neuralgiæ, which could not well find a place sooner in this form, if some of them have been incidentally anticipated.

If I mentioned that this disease might be acute, or transitory, or else chronic, or habitual, it is a fact that requires to be stated somewhat more fully. I do not know from experience that, in a new case, or in a patient who has never suffered before, either from Neuralgia or intermittent, a disease of this nature is ever so transitory as to last but one day, or to form but a single paroxysm. But in the reverse cases, it fre-

quently happens that a complete and severe attack of Neuralgia, in a nerve never before affected, will come on and disappear, perhaps for ever, after one paroxysm; and also without remedies. I believe that this fact has frequently been overlooked, as an accident and not worthy of notice; as every thing is an accident in all science to those who have not the requisite knowledge for generalization. This is a case which has frequently occurred within my own experience, and in many important nerves: as in the maxillary, forming the common Tic, in the sciatic, in the femoral, in the fingers, in the optic nerve, in the testicle, and elsewhere.

Perhaps this may be viewed as the next stage from those flying pains, appearing but once, and for a moment, which I have but just noticed; while, in further stages, the same diseases may last two or three days, or even weeks, still disappearing in the same inexplicable manner. And while I believe that such cases are far more numerous than is commonly imagined, particularly among the lower classes, naturally not so ready as their betters to apply for advice, I also imagine that it is partly owing to our neglect of them that this disease has so long remained unknown or misunderstood.

It is in its chronic or durable state, that, even as the mistaken disease which it is under the

name of Tic, it is best known : and, as a chronic disease, there seems no end to its duration, since, like intermittent, it is often the inheritance of life. Yet in these extremely durable cases also, it loses its regularity, often so completely, that no traces of that can be discovered : a further cause, as I formerly observed, of the errors or obstinacy respecting its real nature. And thus chronic, or perpetual, it may become under any one of its forms ; as it is vulgarly known to be, not merely in the Tic, but in sciatica.

Lastly, when a patient has suffered completely from chronic intermittent, and has also experienced Neuralgia, particularly should he have had it in more than one nerve, it sometimes happens that he will suffer from it in a great number, or may exhibit the greater proportion of the varieties which have here been enumerated ; and, further, those that are to follow : and not only so, but also the anomalous intermittents described in a former part of this essay. In such cases, it would seem as if the whole Nervous system, or the greater part of it, was affected or deranged ; actually diseased in parts, or, from some general obscure condition of irritability unknown to us, rendered highly susceptible of becoming so, and thus of producing a Neuralgia wherever any collateral cause may act at the same time.

## CHAPTER VII.

*On Neuralgic Affections of the Glands.*

I HAVE been able to preserve so little order in this essay, from the plan which I have found it expedient to adopt in conformity to popular opinions, that it is indifferent where I introduce the present section. Nor, in truth, have I any new affections to notice under this head; having already taken occasion to name those which have occurred in my experience. The subject is however an object of scientific interest at least, as it relates to the theory of these disorders; while it is not even impossible that it may prove one of practical utility, as I shall presently show.

I have recently pointed out the flow of tears and the salivation which frequently occur in the Neuralgia of the face; and they are the most common examples of the glandular affections in question. I omitted then to notice also, what may as well take its place here; since much stress has been laid on it where it has occurred, as a wonderful circumstance, though in reality but a mere variety deriving from the principle here alluded to. This is, that in some cases, the Tic or headach has been attended by a transitory, but

violent flow of water from the nose; and when I have known this amount to a pint in a very short time, it is perhaps not surprising that it should have excited wonder. If the catarrhal intermittent, for which I have other authority than my own, and which is so intimately allied to this variety, be admitted here, it will form another example of the same nature; as the Intermittent Diarrhoea, which I formerly discussed, claims also a place in this modification of neuralgic affections. I did not formerly notice another case, which, if correctly viewed by the reporter, is also an instance of a similar nature; while its truth depends on the report of the patient himself, whose word at least I have no reason to doubt, whether his reasoning was correct or not. The effect in this case was a very troublesome increase of secretion from the testicles, accompanying a somewhat slight, though periodical affection in the vicinity, which was clearly referable to Neuralgia; and attending it also in so exact a manner, while his intervals of freedom from the neuralgic pain were comparatively those of anaphrodisia, that he at least felt no doubt respecting the cause. Nor perhaps was his observation unsound; since this last condition should rather have existed during the period of ill health, as, in a mere intermittent, it assuredly would.

The most pointed case of this nature however

that has occurred to me, is that of the diabetes formerly noticed; and the progress of that case was even more remarkable than the commencement, since it showed a neuralgic affection of the kidney existing by itself; a simple disease. It had commenced, as I then showed, apparently as an extension of a similar affection proceeding along the bladder; but, long after that had ceased, the diabetes continued, and as I understand, has not yet, after six years, entirely disappeared, returning however, like the chronic fever, at longer intervals. The attacks, during this whole period, were, on every occasion, as strictly periodical as they had ever been, though the relapses became gradually irregular in recurrence and duration both, as happens in all the very chronic cases of these disorders. Nor, in any instance, did the commencement of the saccharine secretion differ from what had been the former hour of the attack of the intermittent, or proceed beyond its ancient limits; occupying six hours of the day. In the interval of the paroxysms, the secretion was perfectly natural, as it was in the greater intervals of the relapses; while I must further observe, that if the other marks of a paroxysm of intermittent were sometimes most conspicuously present, amounting indeed often to a troublesome disease in itself, there were some relapses in which



nothing but the previous experience and knowledge of this patient would have traced any intermittent and febrile paroxysm, so slender were the symptoms. I need only remark further on this case, that the pain in the left kidney which had formerly attended the disordered secretion, occurred afterwards but rarely, yet was always similarly temporary, and limited to the paroxysmal period; and that the quantity of sugar seemed always proportioned to the severity of the paroxysm or of the relapse, being also very remarkable when the pain was present, and, on one or two occasions, where it was extremely severe, being present in greater abundance than I ever remember to have seen it in the common diabetes, often as that disorder has passed through my hands.

As relates to Neuralgia, these occurrences and cases, and the last in particular, show that the neuralgic affection, when extended to the nerves which supply the glands, can influence their secretions; and, as far as we yet see, that this influence is, in general, mere increase of action; the last case offering perhaps the only exception. Nor is the solution difficult: because, as far as we can perceive, a certain degree of the neuralgic disease in the minuter ramifications of the nerves, has the effect of increasing the action of the small arteries, and sometimes to such a degree,

as will soon be shown, that a permanent inflammation is the consequence.

If this is another new view, it is but a view however from very limited materials; and it is one, consequently, respecting the full value of which we can scarcely conjecture. But if the facts are yet limited, that is no reason for rejecting them: and if we cannot, without an injudicious exertion of the imagination, conjecture how widely they may extend, and what their results as to disease may be in other cases, this must not prevent us from admitting that future philosophers, with the aid of more facts, may be able to draw inferences, the nature of which we cannot perhaps foresee. If the neuralgic action on the nerves, and subsequently on the vessels of the few glands that have been noticed, can produce the effects that we have here seen, and if, further, it can produce those very singular inflammations that will hereafter be pointed out, we have a pathological power, the extent and action of which, as exerted on different parts of the compound animal structure, we can imagine to be both various and considerable; a possible cause of diseases the nature of which is still obscure, and a solution of difficulties, which, if it still stops where all pathological investigations do, advances its yet a certain step in this difficult inquiry.

I have but one suggestion more to offer with

respect to this subject, and it is even a more obscure one than the last. I have formerly observed, and shall have to observe again, that the consequences of severe Neuralgia in any nerve, are very often, ultimately, a loss of power: the result, in those cases where that nerve is the servant of a muscle, being palsy, more or less complete. It is possible at least, therefore, to suppose, that where minuter ramifications, not serving muscles, have been affected, these also might ultimately undergo a loss of power, with results which can be imagined; as it is useless to dwell on that which may not exist. There is an analogy to a certain extent, and that analogy may pervade the whole: whether it does so or not, is the point to be proved, or otherwise, by facts. But nothing will be discovered unless we make such use of these analogies as the rules of philosophy justify; while it is by this proceeding that science has been, in all its departments, advanced, if not created. But if I do not choose to dwell on this, I will put a problematical or imaginary case, that I may show to what this kind of reasoning tends.

If the Neuralgia of the sciatic nerve produces diminution of power, or palsy, in the muscles supplied by that nerve, a similar effect might follow in the nerves of the kidney described in a preceding case; and thus the gland formerly se-

creting in excess, might, in the result, become comparatively inactive, or cease to secrete at all. Or, let us suppose, (what would far better suit those who delight in medical hypotheses than myself,) that an increased secretion of bile were the produce of a neuralgic derangement of the secretory nerves of the liver, this might be followed by a torpor, or paralytic state of those nerves—and so forth; for I will not produce a specimen of that—reasoning it is called—which constitutes far too much of the mass of medical philosophy.

I must not close this obscure and unsatisfactory section, without suggesting how the case of diabetes which I have recorded may possibly bear on the practice in that disease. It would be very singular if this should be the only instance that ever did or ever will occur; and that is surely an hypothesis which we have no right to adopt. We have no right to act thus as to any disease; and while such a supposition obstructs all progress, it is a truth, as I already stated it, that disorders once thought rare or solitary, become sufficiently common when once they have been carefully described and distinguished. There may be many such cases; but they will never be found if they are not believed in and understood. Nor is the diabetes that rare disease which it has so commonly been supposed; neither is it the in-

veterate and incurable affection, nor always the persistent or chronic one, which it has been thought. It has occurred to myself, with no great opportunities of observation, very often: and the truth I believe to be this, that medical advice is never or seldom asked for it, unless when severe or inveterate: whence it has acquired, equally, its reputation of rarity and its condemnation as incurable. In my own experience, it has always been either cured, or suspended for long periods, to relapse and be cured again, and without bad results. And further, I have had frequent occasion to observe, that it is sometimes a merely temporary disorder, and also a very slender and contemptible one; while, among such cases, I should not be surprised were some found, originating in the same cause as the case which I have described. This, in fact, I have already suspected in more than one instance that has occurred to me: but in no case have I attained such command of the case and the patient, as to enable me to say, from that evidence without which I have here advanced nothing, that such was the fact.

How far my own experience and suspicions might be supported by the observations of others, I cannot be certain, as this disorder is generally very ill described by authors; but I at least find that Sydenham has remarked a diabetes following intermittent fevers of long dura-

tion, which, with the laxity not unusual in the medical reasoning of all days, he attributes to debility and a broken constitution. These are not philosophical causes for a disease of this nature ; but while I may conjecture that the cases appertain to the disorder which I have described, I cannot prove it, for want of a more accurate description.

To finish, it will be seen, (if that be held of any moment as to the theory of common diabetes,) that this case settles an idly enough disputed question, namely, whether the saccharine matter is the produce of the stomach or of the kidney. The cause, and the fact, here determine the point in such a manner as scarcely to leave room for controversy, much less for argument.

But I ought not to conclude this very slender section, without noticing a case recorded by Strack ; an observer of great acuteness, whose work, to which I have so often had occasion to refer, must, as it seems to me, have been singularly overlooked, while I was, myself, unaware of its nature at least, though not of its existence, till very recently ; since, while he has anticipated much which I had imagined my own, on the subject at least of anomalous intermittents, though not of Neuralgia, of the nature of which he appears to have been utterly unaware, a knowledge

of what he has written could scarcely have failed to enlighten practitioners on the former subject, and thus to have prevented a long train of error.

In this instance, a salivation followed an intermittent fever, while it is plain that had mercury been used, a physician thus attentive would not have overlooked it. Had there been pain, or Tic, also present, it would as certainly have been mentioned; while the cure of the disease by bark, completes the proof of its dependence on the fever. He makes no further remark; but according to the views which I have here taken, I must consider it as a transference or localization of the intermittent, or, conformably to what I have elsewhere said, a neuralgic condition, or action, though without pain, of the salivary nerves. How it illustrates the preceding case of diabetes from a similar cause, is too obvious to require mention. Such cases of salivation ought not however to be very uncommon, since they occurred frequently in an epidemic at Leipsic, according to Qualmalz; and here therefore at least, there can be no suspicion of their having been produced by mercury, as their dependence on the fever itself is distinctly stated.

## CHAPTER VIII.

### *On Neuralgia from Injuries of Nerves.*

THIS is a subject on which, like the last, I have but a very few facts of my own to produce; and yet, few as they are, I consider them of some value, not merely in the theory of the Neuralgiæ, and as they relate to the immediate cause of these diseases, but as they illustrate that Neuralgia which has perhaps of all been the most grievously mistaken and maltreated; the tooth-ach. Hence I have placed this section here; as it will tend to throw light on one division of that disease, and on that one, in particular, respecting which I have hitherto entirely failed in producing conviction, either in the people or in physicians, so powerful are prejudice and habit.

The first case which I shall notice was the most pointed one; and being also the first that had occurred to me, its effect was to turn my attention to this subject. The patient was a young woman, and the injury was simply the prick of a needle in the end of the middle finger; its consequence being a regular periodical Neuralgia in that finger; which also did not occur till a few



days after the accident. As some weeks had elapsed before she applied for advice, it was easy to ascertain the fact of the periodical and quotidian regularity ; while, at that time, the affection of the nerve extended all the way to the shoulder, exactly in the same manner as it does in sciatica and in other cases of spontaneous Neuralgia. And as, further, some time elapsed before I could effect the cure, I had abundant opportunity of satisfying myself respecting the real nature of the disease. That it was cured by means of arsenic, will perhaps, to many physicians, be an additional proof that I had judged correctly respecting its nature. I shall only add, as to this case, what may be an useful hint to practitioners in such instances, that the patient herself had no suspicion of the regular or paroxysmal nature of the pain at the time of her application ; and that as it was from my own previous views that I was led to make the inquiry, so it was not without much cross-examination that I was enabled to get the information which I afterwards confirmed by my own observation. To expect too much from patients, in point of accuracy of observation, is I believe a very common error, and a very common cause of erroneous judgments or oversights in physic ; while he who knows the necessity of careful cross-examination, knows also, as I once before ob-

served, the opposite hazard which he may incur from leading questions.

In the next case, the injury was a blow on the arm, producing a severe bruise; a fact however which was only discovered by cross-examination, as a regular Neuralgia of a quotidian character was established long before I saw the patient, who was also a young woman. In this instance also, I was led to inquire respecting previous injury, from having long suspected that it was not a very unfrequent cause of Neuralgia; and the information was satisfactory, inasmuch as the disorder was distinctly stated to have followed the bruise after two or three days. It was remarkable however that the seat of the neuralgic acute pain, which was in the middle of the radial nerve, and which extended in the usual manner to the shoulder, was not at the place of the injury, but considerably distant from it. While under cure, this case of Neuralgia lasted long enough to enable me to ascertain personally its perfectly regular character, and, as in the preceding case, that cure was effected by arsenic.

The third, and the only other case of a very defined character, and of which I had a perfect knowledge from the beginning to the end, was a case of Neuralgia, quotidian also, in a toe; and it had followed immediately after a blow or bruise produced by slipping against a sharp-

pointed rock. The surface injured was so small as scarcely to have been perceived at the time; while the extreme severity and duration of the pain was a cause of great surprise to the patient, as it continued for more than a month before it disappeared, and also because it was not in a joint, but in the very extremity of the little toe. No remedy was resorted to in this case; as the patient having an opinion of his own, from being a medical man, could not be persuaded to view it in the light which I did; but it vanished completely and suddenly, leaving scarcely a recollection behind; though he could not well forget that he had been utterly deprived of the power of walking for all that time, as the attack occupied nearly the whole day, ceasing only in the evening. With respect to the nature of the disease, this natural cure is as satisfactory as the cure by arsenic, since it happens perpetually in Neuralgia: and with regard to this patient, I may add that he had at different times been affected by that disorder in the face, and had also suffered from chronic intermittent; a state of things under which all the Neuralgiæ of remote nerves are most apt to occur.

Another case of what I considered the same disease, and from a similar cause, did not come under my notice till many years after it had been established, and when the recurrences had become

as irregular as they always are in Neuralgiae of long standing. So distant indeed was the time, that the patient, never having had his attention called to that point before, could only recollect generally, that he had, for a year or two after the injury, been subject to violent pain, which was sometimes described as constant, and sometimes as daily, with all the usual hesitation that attends such distant recollections: though I could extract, by one circumstance, that it was probably a quotidian and temporary pain, because he could not assert that he had ever observed it but during a certain portion of the day, when he was occupied in his counting-house writing; a fact which served to fix it in his memory. When this case first came under my examination, the pain was clearly temporary and quotidian, occurring in distinct relapses for a certain number of days or weeks, and then disappearing: and, fifteen years afterwards, I found that it was so far diminished in frequency, that it occurred, then, no otherwise than from particular changes in the weather, actual or impending. That he thus considered himself as a perfect barometer, or capable of prognosticating atmospheric changes of consequence, often twelve hours before their occurrence, is a fact which, however inexplicable it may be, or however ridiculed, is unquestionably as established, as, in the case of corns, it is vulgarly

proverbial; since it occurs familiarly with respect to amputated limbs and similar injuries, and happens also in many Neuralgiæ of old standing.

In this case, as I saw it, the pain was distinctly that of a Neuralgia; its seat being the injured part, which was a finger in which a fragment of glass had been buried so as to leave a small induration; the usual pain extending upwards to the shoulder, with increase of heat and sensibility in the hand, and particularly about the injured part, during the paroxysm, which was always perfectly definite in duration, though not regular in recurrence, during the many years that I had opportunities of renewing my inquiries. This patient would not use any remedies, having been, originally, long tormented in vain with local applications: nor did I press what, in cases of such long standing, I have most generally found useless. But I must add, as a better reason, that he offered an example, also, like the preceding patient, of that aversion to admit of this view which I have found so general, I will not say universal; of that incapacity for conviction which is most incorrigible in those who, from their education, as it is called, or place in life, imagine that they must be possessed of what is termed reason; a faculty which, with its application, called reasoning, philosophy presumes to be the only true and just foundation for opinions, and on which, never-

theless, not one in ten millions of the opinions existing or formed in society have ever been or ever are founded.

If this case is less defined and satisfactory than the former ones, it is still, if we omit the injury, exactly the description of a real and spontaneous Neuralgia as this is most generally met with in practice; at least by such physicians as are commonly resorted to when former ones have failed: nor do I hesitate in considering it as a case of this disorder arising from the injury of a nerve. And it is because of its being an obscure case, that I have chosen to be thus minute in detailing it: since it is to mislead readers or students, to cause them to expect in practice that every case of disease shall be a definite and obvious one; as it is to prevent them from acquiring that discernment in obscure and imperfect ones, which, in nine cases of ten throughout the whole Nosology, is that of which they will most stand in need.

If I have no more cases of this nature, of any particular value, to add, I know not that any thing would have been gained by such addition. The evidence is perfect; and I have little doubt that the fact is much more common than it has yet appeared to be, and that, while all the painful affections of the nerves from injuries must be referred to this disorder, so it will be found, now that it is distinctly pointed out, that they are regu-

lar or intermittent in as great a proportion as other Neuralgiæ, and that they will probably be cured also in the same proportion, and by the same remedies.

It is thus proved that the mechanical injury of a nerve will produce, not merely the permanent pain which it is known to do, but a Neuralgia as regular as that which arises from Malaria and is connected with intermittent fever, or from those other, unknown causes, under which it occurs as a spontaneous disorder or a disorder without assignable injury. And, in practice, it is a fact of considerable value; since these cases have been too often considered as incurable, or at least not within the reach of medicines; as the two which I first described had been pronounced by the practitioners from whom I received them. But for the remedy employed, these would probably have become as inveterate as that which I described last; continuing perhaps for life, as is too common with all the Neuralgiæ when suffered to establish themselves.

And though I have had no opportunities of putting this into practice, such is the analogy here, that I should expect to find that the remedies of Neuralgia, bark and arsenic for example, or whatever else it be which succeeds in this disorder, would be found effectual in the pains of the nerves that follow injuries, even if

they were not periodical and regular : thus providing us with the means of remedying a species of distress which I imagine must be very familiar to surgeons, and far more common than a physician, rarely consulted in such cases, can even conjecture. If in my own former, military, practice, they have not appeared so to occur, surgeons themselves can easily explain this : knowing well the different attention which disorders consisting of mere pain or inconvenience experience, in private practice, and in the army.

And before I terminate this brief section, I must not forget to remark, that I have known sciatica itself produced by a blow on the parts which cover that nerve, in more cases than one ; confirming the present views : while I have no doubt that it has occurred to many other physicians. Thus have I seen an analogous disease, in several instances, produced by a blow on the sacrum ; a painful disorder which could not be called lumbago, permanent long after the original injury had disappeared, and similarly extending its influence along the remoter nerves ; while, in one case, the consequence was, simply, an affection within the rectum, lasting for many weeks, and described by the patient as resembling tenesmus ; a disorder which I have little doubt was a Neuralgia of that part, analogous to the spontaneous case which was formerly described. But



it is sufficient to have named some of these more marked cases; as I need not encumber this evidence with further details of the same nature.

I was not aware when I made these observations and drew these conclusions as to the painful disorders following injured nerves, that any other physicians had supposed them to appertain to Neuralgia; they having occurred twenty years ago, when I was without access to books, and the subject having, till again very recently, ceased to engage my attention. But on reading now for the purpose of discovering authorities in support of my own opinions, I find a considerable number of instances where, a similar view I should say, rather than the same one, has been taken; though as in all other cases of this disorder, no generalization has been made, nor any consistent and rational mode of practice adopted; the usual mysterious view under which Neuralgia has been considered, having been applied to these cases, even when thus explained, which is far also from being always the fact, and the remedies having, in a similar manner, been empirical and tentative.

If I can therefore bring no proof from the practice of others, that the remedies of intermittent are those of this variety of Neuralgia, as of all others, a notice of some of these cases will still be of value, as proving that this is a very common form of that disorder, or that Neuralgia

is the frequent result of injuries, while it will also indicate to practitioners, the necessity of paying a different kind of attention to them from what they have yet done. It is unpleasing to feel that this cannot be done without criticising the opinions and the practice of able and attentive men, and sometimes, of personal friends; but such feelings must not be put into competition with the higher duties which every physician owes to society.

In a case noticed by Sauvages, the disorder was the result of a blow, and was seated in the head and neck; this case corresponding in its cause to that which I have described as occurring in an arm. In one under the management of Wardrop, the cause was a prick in the thumb from a thorn: and while the disease was a plain case of Neuralgia, I can only perceive that it was called an injury of the nerve. The absence of the appropriate term would, it is evident, render this case of little value to those who are governed by terms, even had an efficient and correct practice been adopted.

A more remarkable case is one recorded by Swan, where the Neuralgia followed a cut in the thumb, and lasted seven years. He also calls it an injury of a nerve: and while he does not even rank it with Tic or Neuralgia, his remark is, that no remedies were of any use. That is to say,

the remedies which he adopted were of no use, because they were not the proper ones; though the mere duration of this case should have caused a suspicion of its nature, in any one who had ever thought on the subject of Neuralgia. If I am sorry to make such a remark, I may also add my suspicion that the place of this patient and physician, Lincoln, will assist in explaining the duration of this case; and it is not improbable that the endemic of the country was united to or aiding in it. Two other cases related by the same author, one arising from a blow on the eye, and another from a similar injury on the face, are of no other value than as further showing that this singular disorder can be produced by local causes; though I cannot help entertaining a suspicion that not only in these Lincolnshire cases, but in all others, Neuralgia from injury is most likely to attack those who have a tendency to intermittent fever, or have formerly been subjected to it, or are exposed to its ordinary causes. This conjecture is founded on the facility with which Neuralgia happens from partial exposure to cold, as also from causes less obvious, in those who are thus situated: nor is it difficult to conceive further, how the habit of periods, to use this phrase, should interfere in the case of a direct injury to a nerve, and thus regulate the form of the disease so induced.

If I described a case where Neuralgia of the arm was produced by the prick of a needle in the finger, I might then also have mentioned the cases which have occurred in my own practice, as I doubt not in that of every practitioner, of painful disorders following blood-letting, and apparently from injury of a nerve. But as in none of these the pain had assumed the periodical form, I was unwilling to prejudge the question, or decide without precise evidence; while I am gratified in finding recorded cases where this was the fact. These are noticed by many authors: but I shall refer only to Sabatier for one, because it lasted six years, and because, in that case, the division of the nerve was recommended, as it has so generally been in ordinary Neuralgia. The long continuance of this case proves, what indeed the history also does, that it was not understood; and similarly, in all the rest, I can find no definite views of the nature of the disorder, nor even a suggestion that it belongs to common Neuralgia, far less to an intermittent type of disease, or that the cure should be attempted by the same remedies. If the actual practice of Swan and some others, in this as in other cases of Neuralgia, has sometimes been good, it has been by chance, and in the course of a rotation of random experiments; while his recommendation in all

cases, as far as I can make out, is the division of the nerve, as usual.

Cases from tumours pressing on a nerve have not occurred to myself; but I gladly trace them in authors, because they add to the catalogue of the injuries which are capable of producing this disorder. Thus Swan describes a case of this nature from a popliteal aneurism, the pain being in the leg, and in a regular quotidian form. It was cured by or after the operation; while we may express our surprise, that to a physician who had bestowed so much attention on diseases of the nerves, and to these cases among others, and to whom intermittent must have been equally familiar, the periodical nature of this one did not suggest the true theory, or at least the true remedies. In another analogous case, the tumour which caused the disease was produced by a blow on the thigh.

The last class of injuries producing this effect which has not occurred to myself, but which I also find recorded, consists in ulcers: in ulcerations of such character or permanence as to have corroded, or destroyed, or perhaps merely laid bare a branch of a nerve. They require no particular criticism; but they have a value in the views which I have here given, because they illustrate the case of toothach from a carious tooth,

since that is an ulcer similarly affecting a nerve ; while it may be thought that whoever had supposed such an affection from an ordinary ulcer to be true Neuralgia, ought to have formed the same universal conclusion as to toothach. That this has never yet been done, assists in proving what I have so often here advanced ; that, using this term in its philosophical sense, the procedures of physic have been empirical, from its origin to the present day, that it has never conducted itself by the laws of science, and that while seeming unaware of the powers and utility, as of the necessity, of generalization, it has not even proceeded in a correct manner in the investigation of its facts : thus, if ignorant of the method of erecting a superstructure, neglecting even the means of laying a true foundation.

If I have remarked the singular effect which changes in the state of the atmosphere produce on nerves affected by Neuralgia from whatever causes, and very strikingly in the case of injury, it is at least interesting to remark that this bears a close analogy to the fact just alluded to ; namely, the effects of the same nature, produced from the same cause, in amputated limbs or other ancient and severe wounds ; as also in that case, somewhat mean, it must be admitted, already quoted, namely, corns. In the former class of cases, nerves have been injured ; and, in the last,

we must conceive a persistent injury, pressure, analogous to that described in some of the foregoing ones. The conclusion would not be much overstrained, were we to suppose, that, in such instances, the nerves are in a state at the injured part, similar to their condition in common chronic Neuralgia when dormant, (an unknown one we must regret,) and ready to be excited to pain by the application of an occasional cause. Hereafter, possibly, these considerations and analogies may aid in throwing light on the immediate, or proximate cause of this class of disorders; though I cannot pretend to say that such uncertain Neuralgic pains would, in any case, be remedied by the means which are successful in the more regular and marked diseases of this nature.

But before I part from this branch of the subject, I must remark that Swan and other authors besides myself, have recently begun to consider the pains which are produced in wounds during their healing, whether from ligatures on the nerves, or ulcerations, or the general injury, as analogous to Neuralgia; a fact, of which I never entertained a doubt. How far these may be amenable to the treatment of common Neuralgia, is a trial which I must leave to others, and to surgeons; since I can have, now, no opportunities of putting it in practice. That this has not been yet attempted, as far as I can discover, is only a

natural consequence of what I have so often noticed ; but the cure of the toothach from caries, in this manner, holds out at least the promise of being able to relieve, in this way, no small mass of distress. And this also suggests a very difficult and delicate question, approaching too nearly to a hypothetical speculation to be hazarded without some repugnance. It relates to tetanus as the result of similar injuries. That this is one of the most obscure diseases in physic, as it is among the most formidable, is a truth too well known ; yet there is some analogy, if not very near, between Neuralgia producing convulsions or spasms, and this disorder ; while, in some cases, it is preceded or accompanied by pains in the nerve which has received the injury. But I will not pursue what is but a hint towards further inquiries : only, if it shall prove that there is even an affinity of a remote nature between the two, it may not ultimately prove useless in regulating that practice as to tetanus which is now so vacillating and so undetermined.

Lastly, if I have noticed the subject of corns, it will not be useless to repeat somewhat more distinctly, that even the ordinary pain from this cause, well known to be often very severe, far more so indeed than can well be explained on any other view, and not less well known to be sometimes periodical, may be, or rather probably is, a



Neuralgia from injury : and it will be deserving of trial whether such pains may not be removed or abated by the remedies of that disease, in any case often sufficiently severe to justify a proceeding of this nature. Under any view, the analogy is too remarkable to have permitted me to pass over what, if a trifling fact in itself, is not such as it relates to medical philosophy.

Before I conclude this chapter I may add a remark; or rather a conjecture, to be verified, or not, like many more, by future observation. It relates to the chronic, and often very remarkable pains, which follow injuries, such as sprains and bruises, and which are generally referred to rheumatism by physicians, though often vaguely attributed to the original injury, by those who never think of inquiring how that can act at such a distance of time. On some occasions, I have had abundant reason to believe that these belonged to the class of Neuralgiæ from injury : and were they even called rheumatism, it may be questioned whether that rheumatism is not of the same character ; while I need not dwell on what was formerly suggested as to rheumatism in all its forms, when I took occasion, in the first volume, to point out its remarkable connection with intermittent fever.

## CHAPTER IX.

### *On Toothach.*

IF the subject of the present chapter may seem to occupy more space and to be treated with much more detail, than so vulgar, and apparently so well known a disorder can justify, the more particularly when it has occupied numerous treatises and is conceived to be as thoroughly understood as any thing in physic can be, the necessity for such detail will soon be apparent : since not only is it closely connected with most of the leading facts belonging to Neuralgia, but it is only by drawing those analogies somewhat minutely, that I can expect to establish the present views. And since utility, the wish to diminish human misery, is the object of this entire essay, it is not by the intensity, the mortal power, or the popularly terrific character of any particular disease that its value must be measured, or that I have myself measured it, but by the arithmetical quantity of suffering which it produces. The hydrophobia may be an object of interest or of universal alarm: but he who shall discover a sure and rapid remedy for even a common catarrh, would be a

greater benefactor to his race than the man who may invent a specific for that celebrated disease.

But whatever arguments or evidences I may produce for the purpose of proving that toothach, in all its modes, is a Neuralgia and nothing more, a variety of the general disease under consideration, however perfectly I may draw the analogies, and thus unite every variety of this disorder under one leading form, while I also connect them with the simple Neuralgia of the same part of the body, I enter upon the subject without the slightest hope of producing the conviction which I feel, which I have felt almost from the first moment that I had entered on the study of physic.

It is not that I expect opposition from arguments, nor from medical facts or principles, assuredly at least, as I hope, not from enlightened and philosophical physicians: the difficulty arises chiefly from moral impediments; and they are such as were never yet surmounted without the aid of patience and time, being the obstacles which have invariably encountered every novel proposition which has tended to overturn a popular and established error or system. It is scarcely in man to admit that a belief which has lasted almost since the beginning of the world is not well founded; that what appears as plain as it is universally received, is not true, that mankind has so long proceeded under error and igno-

rance, and that a majority comprising every individual in the world from the creation, except one person, is in the wrong; far less to concede that this visible, every-day individual, one of the general mass, is the person capable of overturning the universal belief, and of establishing his own opinions or belief in its place. This is human nature; and it is the history of all attempts of this kind in the “quidquid agunt homines;” in every thing at least that is of familiar or universal reception.

Nor do I consider, that, against such a feeling, the most incontrovertible proofs would produce conviction; because I believe that in reality there is no such thing as conviction, except in the solitary case of mathematical demonstration: where the facility of convincing arises, in a general sense, and with exceptions which it is superfluous to notice, from two causes chiefly, rather than from the purity of proof and the exertion of reasoning powers; and each of these being moral causes, while the first is that which, as the foundation of all opinion, is the very difficulty against which we have always to contend in other cases. The one of these is, an universal *prejudice* or rooted *opinion*, that mathematical science can prove what it undertakes; and the other cause is, that men are perfectly indifferent what it does prove, and would be just as well content were it

demonstrated that a triangle comprised ten right angles as two. In every other case, there is habit, passion, prejudice, interest, what not, on the one side; and demonstration, which, to the multitude, is nothing at all, on the other; since to none is that a ground of—belief; as I will not abuse the term conviction by thus applying it.

If there is any one disorder on earth, at least in civilized society, which is universal, it is the toothach; since few indeed have passed through life without experiencing it. And while its frequency and familiarity have rendered the entire mass of mankind, almost every individual that ever existed, judges and physicians on this subject, at least in their own estimation, so have that and other circumstances taken its treatment, as well as its theory, almost out of the hands of physic, to lodge it in the hands of those who, on a point of this nature, can scarcely be the best of philosophers.

But among all, among physicians and the multitude alike, the leading cause of the error on this subject, is somewhat similar to what I had occasion to point out before. There is, in the first place, a term, a name as old as physic; and I need not again say that a successful and popular term is, in itself, philosophy; cause; theory, every thing; or that it stands at least in lieu of all reasoning and all investigation. It is the

Toothach ; that is sufficient : after the philosophy is established, the remedies follow of course, and, in this case, it is extraction, the amputation of the imagined seat of the disease : the remedy of the Dracos in legislation for the extirpation of moral diseases. :

As an aid to this reasoning, the very groundwork perhaps of the whole, toothach is pain, pain in a tooth ; and thus the entire definition, the whole philosophy and theory, are comprised in this sole feature and term. But when this pain is present, the tooth is frequently unsound, diseased, carious : and thus is the opinion that the pain proceeds from the visible disease, more firmly fixed, while this leading variety becomes the type and parent of the whole. Thus, if the tooth is not really carious, it will be so hereafter, or it ought to be so ; or it is diseased in some other manner (ingenious men find out that there is an abscess concealed), or, as even Cullen has determined, " it is always dependent on some immediate application of acrid matter to the nerves of the teeth," or, in short, (for who shall find reasons for those who have none?) it is a diseased tooth in some way, because it gives pain, and therefore it must be extracted : while, at this conclusion does Cullen himself arrive. And if, after all, the disease is not even in the tooth, but in the jaw, then it must be in the roots, or in the

antrum maxillare, or somewhere else; and still it is "the toothach," and still the tooth, or all the teeth, as it may happen, must be extracted.

Very seriously, such is the theory of toothach, in the hands of many more than Cullen: and such the leading practice at least; the ultimate remedy. And I believe it further to be true, that if physic and physicians may appear here to be blamed, and also to deserve blame, there are some excuses to lighten their share of the demerit, as to the practice at least; though as far as they have taught what should be concluded and done, they have had ample liberty. If the toothach ever falls within their department, it is, more correctly, the business of surgery, under the views of the fundamental remedy which are entertained; but it is the patient most commonly who is the real physician, and who dictates what is to be done; while the remedy is administered by the druggist, or, if it be extraction, by the apothecary's apprentice, to whom it is the virgin operation of his surgical education. When the barber is the physician in these cases, the philosophy and the practice are not better, and could not be much worse.

And still there is another cause, and that cause is the one which has promoted the barber to the rank of dentist. It is not here my business to inquire into the utility, or rather the inutility, of

a dentist and his operations: nor to encounter, unnecessarily, the prejudices respecting the wonderful value of his various arts, which are entwined with the most invincible feelings of our vain nature. Yet I may question whether he who is an ingenious workman in ivory, he who is a vendor of secret powders and washes, he whose strength of hand is not checked by any superfluous refinement of feeling, or he who knows no more of the human anatomy than that some teeth have one root and some three, is exactly the fit person to reason about the diseases of the human constitution or to be intrusted with their cure; and, most of all, where, to blind habit and mechanical practice, there is occasionally added a small bias of self interest. If this doubt be well founded, let the dentist who is a surgeon, or the surgeon who is a dentist, (for such, fortunately, there also are,) be the person to be intrusted, at least with the toothach: since should he not know its nature at present, it is he at least who will learn to understand it.

But I must pass from these general remarks, which were really necessary for the purpose of anticipating the objections which I foresee; while if they are taxed with severity, the apology is ready. It is the cause of human nature, of all mankind, against that of a few individuals of that



great mass; and the smaller evil is counterbalanced by the general utility.

I shall now proceed to describe this disorder as far as is necessary; but it is here especially requisite to distinguish it into varieties; as on a due division of those, much of the arguments which I have to produce respecting its real nature depend. And, on account of those views, I must be permitted to form my own division, and hence to neglect whatever has been formerly written on this subject. Yet as I shall not attempt to give so full an account of toothach under all its forms and connections as if I were writing a sole treatise on that subject, I shall still suppose that the reader has studied, or will study, many works where he will find useful information, if generally under a false theory. My object here is, to reduce the disease under such leading forms, that the cases which occur may be referred to the one or to the other; to establish an analogy throughout those, first, and further, between the whole and Neuralgia, by evidence and reasoning; and finally, to which all this tends, to point out what appears to be the rational method of cure. For this purpose, extreme minuteness and detail are not required; because if the leading objects are attained, the outline can always be filled up by every physi-

cian; and the plan followed here is therefore that which has been adopted throughout the whole of this essay.

The heads under which toothach is divided, may, for the present purpose, be conveniently rather than correctly, assumed as the following: but they are very indefinite divisions, as they run into each other, and as individual cases present endless modifications.

It may be rigidly periodical: while, in this case, it may be either combined, or not, with chronic intermittent fever: and further, in this case also, a tooth, or teeth may be sound, or carious, this condition being here considered incidental, not essential. Or, it may be irregular in its paroxysms, under all the same variations; and in both of these varieties, it passes into the common Neuralgia of the face; or, cases occur in which either name is equally applicable. This is the periodical toothach so familiar to those who have paid the attention to this subject which it deserves, but which is so very often overlooked, not merely by the physician, but very generally, if somewhat more remarkably, by the patient; as, by the former, its passage into highly marked Neuralgia seems equally to have been neglected, and most so when a carious tooth is present.

In these forms, it is here considered as spontaneous Neuralgia: while, in the next place, it may

occur, either casually, or more regularly, that is, under all the variations of that general disease, and traceable in a marked manner to a carious tooth; the pain being fixed in the nervous branch by which that is supplied, or originating in that and spreading from it. In this form it is here referred to Neuralgia arising from an injury to a nerve.

Further, as happens in cases of common Neuralgia, the excitement of the minuter vessels may be such as to produce temporary and paroxysmal, or, more permanent inflammation in the membranes, or generally about the face; when it becomes rheumatic toothach or rheumatism of the face, (neuralgic inflammation.) The chief varieties here, are produced in the following manner. The general (rheumatic) inflammation may, as I have just suggested, be paroxysmal and periodical, and even regular, or it may be permanent; while it may attend a carious tooth which is pained, or free of pain, or else a sound tooth in a state of pain; and such pains under any mode of regularity or otherwise. It may also be accompanied by a neuralgic pain independent of the general pain of the inflammation, and not in a tooth; in which case, it is plain, it belongs most unquestionably to Neuralgia, though, in the usual practice, ranked with toothach.

Or, lastly, all other pain but that of the inflam-

mation itself may be wanting; when it becomes, most strictly, what is called rheumatism of the face: this state also sometimes occurring, even without the presence of a carious tooth. If this rheumatism of the face with separate neuralgic pain should in correctness have been ranked under common "Tic," the last division, also, in a more scientific arrangement, should have been reserved for a distinct section: but its obvious affinities and the received usage render it convenient to include it in the present one; particularly as its limits with respect to the former varieties are indefinite.

That I have justly referred all these diseases or varieties of disease to Neuralgia, will I think appear in the course of the description: and consequently, that I am justified in considering toothach, universally, as this disorder, or as a species in the leading genus treated in this essay. I shall therefore proceed to describe them as far as is necessary; while I shall in conclusion attempt to sum up the evidences in a condensed form.

The rigidly periodical toothach is by no means an uncommon form of the disease, but it must be sought to be found; its regularity being almost always overlooked, as I have just observed, as well by the patients as by practitioners. In scarcely any one instance out of hundreds that

have occurred to me, has this character been observed by the patients till it was suggested: and in many, it has required some argument, added to many days of compulsory self-examination, before the fact was admitted. So strong are prejudices in this case, and especially where there chances to be a carious tooth; so long has it been the habit to consider the pain as produced by this cause, and the disorder as a purely local and independent one: while I may also add, that the suspicion entertained respecting a favourite system on the part of the physician, often increases the opposition to this view, from very obvious and common moral causes. And further, if it is not more frequently observed, the cause lies also in a great measure with the practitioners. Even where these are medical persons, the vulgar conviction that this is a purely local disorder, or the ignorance that it possesses the connections which I am endeavouring to prove, added to a species of neglect, or a contempt for an ailment which is almost proverbially despised *in another person*, is productive of carelessness, and causes every circumstance but the pain itself to be overlooked; thus perpetuating that ignorance which it is my object to remove. But as, even where physic is resorted to, medical persons are much less consulted than dentists, to whose whole philosophy on this subject I have already alluded, it is much

less surprising that so little discrimination is exerted respecting this disorder ; while it must further be remembered, that as far as the characters of a disease are to be assigned from general averages or arithmetical numbers, from the multiplicity of cases studied, this is one for which the far greater portion of the people demand no advice from any one, unless perchance from the apothecary's apprentice or the nearest barber.

Any person who chooses to seek for them, will find cases where the periodical return and the paroxysmal duration of toothach are as regular as those of the most regular Neuralgia or Intermittent fever, and under every variation under which these occur. And this is equally true whether there is a carious tooth or not; while, where that is not present, these cases, by occupying a particular spot or region, and by the quality of the pain, pass gradually into the common and regular Neuralgia of the face (Tic) by gradations so insensible as to have no defined boundary. And while those who may think fit to pursue this inquiry, and prove the truth of what is here advanced, must conduct their investigations upon this principle, they must not forget that such paroxysms occur very frequently in the night, or at least, on a calculation of chances, as often, of course, as in the day; and that it is in such cases in particular, that it is difficult to extract the

truth from a patient : while there is **not** one in a thousand who can be persuaded that such a disease is constitutional as well as local, still less, where there is a carious tooth, that the pain can be removed by bark or arsenic, or by internal remedies of any kind.

Whether it is really true that periodical toothach occurs more frequently in the night than in the day, I cannot decide ; but so assuredly it has appeared to do in my own experience. If true, it may be thought remarkable, as the paroxysms of intermittent fever are most frequent in the day-time : yet it is not perhaps inexplicable, as it is obviously a disorder easily influenced by occupation or impressions on the mind, while it must be recollected also that every pain appears to a patient most intense in the solitude and silence of the night. Thence the unhappy fate of physicians, perpetually summoned from their beds by the selfish, during the idle alarms of a night watching or nocturnal awakening : alarms which the return of daylight would have removed, which even a candle and a book might have dissipated.

In transient, or acute cases of periodical toothach, it is less easy to perceive that there is any general affection of the system ; though a discriminating observer will often find the usual symptoms of obscure intermittent fever, even here. When chronic, or habitual, it is more

easy to observe this, as far as my experience goes. In any case, the symptoms are those which I formerly described as attending Neuralgia, and need not repeat; while the painful state is also the hot stage of the paroxysm, or at least is most severe at that time. And if the local action is here considerable, the excitement of the minute vessels often produces a swelling, or rheumatic pain, or tenderness, of the surrounding parts, which is equally paroxysmal and transient.

In such cases, and indeed in almost all instances of long continued or habitual toothach, even if irregular, an acute observer will easily perceive that peculiar physiognomy which I have so often described; and few physicians can be familiar with such cases of toothach, without having noticed the singular complexion often present: transitory at times, but often as fixed as are the visceral diseases so often present in those who are subject to chronic and inveterate toothach. This is a fact which I must however notice again, and shall therefore pass over at present.

But further, this regular toothach is very often found in persons who are labouring under chronic intermittent; forming sometimes a kind of appendage to that disorder, at others, replacing a paroxysm or a series of paroxysms. Thus have I seen a case of what must be considered a double



tertian, an ague formed in China, of a variety notorious for its inveteracy, where one of the alternate days presented a regular and simple intermittent paroxysm of considerable severity, and the other a toothach equally regular and severe; the disorder having lasted under this form for nearly a twelvemonth when it came under my notice. Other cases, of a similar nature, but less durable and decided, have also occurred to me; as have more instances than one of a double quotidian with similar alternations. Thus also, in such chronic intermittent, have I seen an entire relapse, consisting of toothach, and alternating, no less than three several times, with relapses of simple intermittent; while in others, a severe period of toothach, occupying some weeks, has suddenly ceased on the occurrence of a series of simple intermittent paroxysms. And in these cases, let me remark, the same exact period was preserved in both disorders; the toothach, when its relapse was in existence, occurring at the same hour as the fever had done in the other ones.

In an analogous manner, this toothach is found in patients of this description, replacing other neuralgic affections; and thus have I found it to alternate in these several ways; that is, either by paroxysms or relapses, with hemicrania and clavus, or other varieties of periodical headache, with periodical rheumatism in a shoulder, with Neu-

ralgia in the fingers, and with that palpitation of the heart which I consider as a Neuralgia ; nor do I doubt that greater experience in a disease which is seldom accessible to physicians, would have given me a far greater command of minute and particular evidences of the same nature.

One however I may still notice, for its remarkable combination, while the leading type must be referred to the double quotidian ; and it is important to remark that, in this case, the patient had been long subject to double quotidian under many different modes. In this instance, the toothach alternated daily with a headach ; while, on both days, after the cessation of the pain, there occurred a regular intermittent paroxysm, being probably the second quotidian fit and not a continuation of the painful one. In this particular patient, under every form of the disorder which he had experienced, there was seldom more than an hour or half an hour of interval between the cessation of the first and the occurrence of the second paroxysm.

If I have thus described a regular periodical toothach, I am perfectly aware that such a disorder has been long known to physicians ; but if I am describing an acknowledged disease, I trust that I am also correcting the history of one that has been misapprehended, since, while it has generally been treated of as a mere casual variety

deserving of no particular notice, while commonly also overlooked, or confounded with ordinary toothach, I can find no work in which its dependence on intermittent has been pointed out, still less where it has been referred to Neuralgia, or even connected with the periodical headach to which it is so nearly allied. It is however evident that it is the most important variety of this disorder; since it forms a main connecting link between all toothach and the generic disorders to which that is affiliated, as it constitutes also, almost the basis of the whole investigation.

It was here therefore a fundamental necessity, as it was my main object, to point out that connection which it possesses with intermittent fever and with Neuralgia both, which has never yet been fairly understood or admitted; to show, in fact, that this toothach, be its varieties what they may, is a mode of intermittent fever with local symptoms, or a neuralgic intermittent, and that it forms but a variety in this general division of the leading disorder. Should the febrile symptoms, or the accompanying intermittent, be not present, or difficult to discern, it will still be a regular Neuralgia at least, to those who continue unwilling to admit the connexion between these two forms of disease. If this view is important as it relates to the cure of periodical toothach, so is it with respect to the remedies of that pain-

ful disorder under any form ; but it is of even more importance in enabling us to establish a just theory of the entire disease ; in attempting to prove, as I hope to do, that every toothach is a Neuralgia, be its forms whatever they may.

This is a truth which, when once presented, will strike every patient at least who has experienced common Neuralgia of the face (Tic) and toothach, whether it should convince him or not as to the general truth of the present theory ; so exactly similar are, not only the two pains, but the collateral effects, and the general, often indescribable symptoms that attend them ; such as irritability, mental affections, and constitutional derangement of various kinds, not easily detailed, yet sufficiently noticed in many preceding parts of this essay. But I must trace this connection more accurately, and it may form the introduction to an account of the less regular varieties of toothach. I shall thus be enabled to connect these with ordinary and irregular Neuralgia, as I have united the most regular form to the equally regular neuralgic intermittent and the common intermittent : and if I have formerly succeeded in proving that every Neuralgia, however irregular, is but a mode of the regular disease, the same conclusion must inevitably be extended to irregular toothach, and the proof of which I am in quest will be complete.

In the common Neuralgia (Tic) of the face, the pain is not always that severe and definite one, limited to a particular nerve, which it was once supposed ; and however physicians might at first have been led to confine that unlucky and mischievous term to this definite form, there are very many at least who are now willing to allow a wider limit to it, and to admit that Tic may exist under at least a few modifications, though this somewhat more correct view of the facts is as yet very much confined.

In reality, and as I have formerly shown, the Neuralgia of the face appears under endless shapes, both as to the place, and the nature or intensity of the pain ; and I have, I trust, succeeded in showing, that all the periodical forms of headach are but this disease in fact, and that those pains or headachs may be Neuralgiæ, even when their regular returns have ceased, or where they never existed ; just as the admitted Tic may be equally irregular.

Now, if it is easy to establish this connection, it is even more so to establish that between common Neuralgia, be it as irregular as it may, (Tic) and toothach. Theoretically, and consonant to all the facts formerly stated and the explanations given, they might be expected *a priori* to be the same ; since no one point out of all the numerous points of the many nerves which supply the

face, can be supposed to possess an exclusive privilege as to this disorder. We should therefore expect to find it every where; and, among other nerves, in those which supply the jaw as leading branches, as also, further, in those, more minute, which furnish each individual tooth.

Or, to state this more particularly. If the inferior maxillary nerve can be affected with Neuralgia in its trunk, that affection is, admittedly, not limited to any one point. Let us pursue that point as a mathematical fluent. It proceeds along the nerve till it arrives at the place where the ramification is given off to a tooth; it proceeds even into the tooth; and the *name* is then changed to toothach. But change of name is not change of disease: or if it be so, let the opposing assertion define the point in this fluxion, where the cessation takes place and a new element of equation must be adopted, or where a new disease commences. To determine thus, is to be guided by terms, not by facts or reasoning: this is the very empiricism of which I have so often had occasion to complain; unworthy of science, as it has been the eternal obstacle to the progress of physic.

And, in practice, the facts coincide with this general proposition. Or, whatever is true of periodical Neuralgia in this respect, is true of the irregular disorder: and, similarly, as the former

connects itself with periodical toothach, so does the latter with the irregular and more common forms of this affection. That is, if a periodical Neuralgia is found to occupy different places in the nerve or nerves, from the main branch to its termination in the tooth, if it varies its place similarly, or if it extends its influence, or, be it severe or otherwise, or be the mode or quality of the pain what it may, or let it affect one tooth or more teeth, and let those be sound or carious, every one of these circumstances will be found in the irregular Neuralgia. Or, to conclude, the limits between irregular Neuralgia and irregular toothach are undefinable, as is true with respect to those two disorders when regular: or, out of four forms of disease, it having been proved that they are identical when taken by pairs in any manner, the whole must constitute but one disease.

Or now, to state the facts in the ordinary language of practice, every part of the face, to any extent, great or small, may suffer this pain, in an irregular as well as a regular manner; and in every one of its modes, from the most severe to the most slender or diffused; and, equally, all these variations of pain may occur in any number of teeth, or in one tooth, and without any regard to these being carious or sound; though I shall hereafter show that there are additional, separate,

reasons, why a carious tooth should more frequently suffer than a sound one. All these varieties occur daily in practice; and he must be a very inaccurate or unpractised observer, who has not found, in his experience in toothach, almost every form that can be conceived, from the simplest pain of one tooth, to a distinct Neuralgia, and all connected by intermediate links; many more varieties in fact than it could serve any purpose to detail.

Now, had the term Neuralgia been first known, or rather, had such a disease as a painful state of a nerve, generically, without regard to place, been described, ascertained, and admitted, had a just medical philosophy preceded popular opinion, or rather, had physicians generalized where they have been employed in following petty details, the very term Toothach might never have been admitted, at least as a medical and philosophical one, and the true bearings and nature of that variety of Neuralgia would have been understood from the beginning: or, had the term Toothach not been made generic, or supposed to include and draw a circle round a distinct individual disease, still more, had not that term become so inveterately rooted and so popular, so united also in the minds of the multitude with the false medical opinions which it includes, there would not at this day have been the slightest difficulty in



persuading physicians, and the whole world also, to admit that Toothach was Neuralgia, and nothing more; and not only a variety of that painful disorder in the face, called Tic, but of every other analogous pain, even to Sciatica. In every point, except place, they are, all, the same: but rather than detail all these circumstances of resemblance, since that would be to repeat much that has already passed, it will be much briefer and easier to ask the opponents, if such there shall prove, to show where they differ. It will scarcely be argued by any physician or anatomist, that what is one disease in one portion of a given nerve, is another in a different portion, however it may be by the people or the ignorant; seeing that the seat of the disease is the nerve itself, and not the part, the tooth, which it supplies: since this would be to argue indeed like the vulgar, and as if we should suppose, for example, that aneurism of the aorta was a different disorder from popliteal aneurism, or gout in the foot different from gout in the hand.

But to pass from this reasoning as to the identity of Toothach and Neuralgia, I shall proceed to point out a few of the peculiar and collateral circumstances in which the irregular forms of toothach coincide with the similarly irregular forms of admitted Neuralgia, that I may draw the resemblance closer, by evidence in support of

these arguments. If it is generally the more philosophical proceeding to produce the generalization after having detailed the facts, it is often most convenient to lay down the proposition first and to adduce the evidence afterwards ; particularly in cases like the present, where we must adopt a superfluity or variety of evidence, in hopes that where our business is to convince prejudice, not reason, there may prove, in that variety, arguments adapted to the endless varieties of prejudice and temper ; since even feeble ones often operate here, where demonstration itself would fail.

It is here indeed that the great opposition lies ; for while there are many who may not refuse, now, to believe that the periodical toothach may be a Neuralgia, as it is an intermittent disorder, I have not found one willing to admit that this could be true of the irregular toothach. And if I dwell minutely on this evidence, it is because I think it one of the most important points that can now be established as a new one in physic ; if not indeed as concerning human life, yet as affecting at least, and deeply, human comfort ; since the present false theory is the cause of an erroneous practice productive of misery and inconvenience, which becomes, by its multiplicity and diffusion, an immense mass of evil.

If it should be asserted that this view has al-

ready been taken of toothach, the answer that it has not, is completely proved by the present practice, which is not even incidental, but universal; if it were even not rendered evident by a reference to systematic writers. I do not here distinguish Cullen because I consider him the highest authority in physic, or from the authority of his school having made such an exclusive impression on myself as the first teachers usually do on a young mind; but because his work is considered a high authority, and because, on this disorder, he is, somewhat unusually, clear and decided, while very generally followed. And let me also say, if I have not already explained myself sufficiently, that, in no case, often as I may have selected him as the mark, have I intended any properly personal criticism. But while some name, as the organ of opinions, is necessary, it would even have been disrespectful to have selected a minor one: if also it were not an act of justice, to science as to mankind, to note for pernicious opinions, him, be he who he may, whose authority is likely to render his errors doubly injurious.

The former proof then, in question, is analogous to that which was offered before, relative to the division of the nerve in Neuralgia; and if this particular practice has lately fallen into disuse, not from a better theory of the disease, but

from experience of its inefficacy, there is not an instance, (I do not mean as to individual cases, but as to varieties of the disease,) in which the extraction of teeth is not resorted to for the cure of toothach, even where they are sound, and in the hands of physicians and surgeons of the highest reputation; subject of course to exceptions from various causes, but not one of these arising from a just view of the disease. If I could quote a hundred examples of even entire ranges of teeth drawn for this purpose, I need not allude to a stronger proof of the general error than the case of a late esteemed and lamented physician, himself of the highest rank, and surrounded by the whole profession; since, together with a division of the nerve, he submitted to the loss of eight teeth, and yet died, it is said, of a disease which there is every reason to believe might have been cured under juster views, or under which, life at least would not have been sacrificed.

And if it is the contemplation of cases like this, facts in thousands, if not always equally serious and equally vexatious and painful to reflect on, which has made me anxious to enforce my opinions throughout this essay, under that conviction of their truth which I have attempted to produce in others, so must that feeling be the apology, not merely for that anxiety which is

perhaps too visible, but for the often unphilosophical superfluity of manner in which I have adduced and urged the evidences, and for a warmth of argument, as for a retrospective criticism, which, on any point of cold and speculative truths, I should have thought unjustifiable. I cannot calmly see that life has been lost and misery produced by want of knowledge, or erroneous views, as in the case in question; nor write without enforcing what I think to be that knowledge, in a far other manner than I should have undertaken the proof of a problem in physics or in the abstract sciences.

Before, however, I proceed to point out certain collateral resemblances between irregular toothach and Neuralgia, I must anticipate the objection which will be again made, as it has been to myself, founded on its irregularity: this being, in fact, the strong hold of the sceptical, and the only objection of apparent strength, feeble as it is in reality, which can be urged.

In treating of common Neuralgia and of intermittent headache, I have already shown how often these affections are irregular, and what the causes of this irregularity are; as I have equally explained in what they consist, and further shown how often they are considered so, when it only requires a more careful examination and juster views of the disease, to discover a certain re-

gularity under this apparent obscurity. It will be sufficient to request the reader to turn back to that subject; or what is better, to fix in his mind all that has already been said on this fact, irregularity, throughout this essay, as well in treating of intermittent as of the several Neuralgiæ, and to apply the same reasoning to the toothach. It would be mere repetition to traverse all this ground again; nor would it be any compliment to a medical reader, to suppose that he is not himself capable of making the application to the cases in question as they may occur to him. And if he will keep in his mind these several circumstances, I believe, that, with one exception, he will scarcely meet a case of toothach, however irregular, which he will not be able to parallel by a corresponding one of Neuralgia, and also of common intermittent; while, most generally, he will be also able, with due attention, to give reasons for that irregularity. The exception to which I allude is, where a tooth is carious; because there is here engaged a separate cause of irregularity, which I shall have occasion to notice more particularly in treating of that variety of toothach; a variety which I rank with the Neuralgia from injury.

Yet I cannot quite leave this subject thus; because, in toothach there appears to be one, perhaps two sources of irregularity, which are

less active in the Neuralgia as it occurs in many other parts of the body.

I have formerly shown that in persons susceptible of intermittent fever, or habitually suffering under it, the application of occasional causes, such as cold and moisture, frequently induced returns of single paroxysms or of entire relapses; and this happens in such a manner as often to give the disease a very irregular appearance. The same is true of Neuralgia under the same circumstances; while I have further shown, that, even in those not subject habitually to this disease, a single fit, or a few paroxysms, will sometimes be brought on by such incidental causes; especially by cold, and, as is perhaps especially true, by a partial application of this.

Now the face is particularly subject, from obvious circumstances, to suffer from cold, and from partial cold; while the teeth themselves also suffer separately, from familiar circumstances known to every one. Hence an irregularity in toothach, arising from a greater exposure to incidental causes; while the fact, as such, is too familiar to require further mention. And if derangements of the stomach can act, as is equally familiar, in producing common headaches, a fact apparently depending on that peculiar connection expressed by the obscure term sympathy, so do they frequently excite the true, and

even the regularly periodical neuralgic headach in many persons, whether habitually subject to these diseases or not. Hence, therefore, we may comprehend, how irregularity in common toothach may result also from its being partly under the influence of the stomach; while the truth of this influence is proved by the well known fact that toothach is sometimes actually produced by a deranged stomach, and that it is even cured by emetics, though even in these cases, the real cure may be that of an intermittent, sometimes thus removed; a solution which is in some measure corroborated by the parallel effect of this remedy in the neuralgic ophthalmia hereafter described.

Thus then I have shown that the objection against the present view of toothach which is founded on its irregularity, is of no force; and I may therefore continue the subject which I interrupted for the purpose of this statement in anticipation of such an opposition; that is, the evidence derived from collateral resemblances between Neuralgia and Toothach.

In numerous cases of common toothach, in every well marked and severe one at least that I have ever had proper opportunities of examining, I have never failed to trace one or more of those symptoms which attend simple intermittent; that is, indications, varying in number and degree, of a febrile paroxysm: and while those symptoms



have been, in general, particularly discernible in the chronic cases, or where toothach had become an often recurring habit, I have found ample reason to believe, that, wherever the disease has persecuted the patient through a long life, the visceral glands have been affected ; or, that however irregular, it has, like the irregular and chronic intermittent, been associated, whether as effect or coincidence I have already declared my uncertainty, with derangements of the liver or spleen, or both, but most frequently of the latter. And in some cases, this connection has been so obvious, that while the patient was habitually suffering under a palpable or a grievous chronic intermittent, the irregular toothach has been associated with the disease in all the ways in which the periodical one is, or in the exact modes already pointed out as to the several Neuralgiæ.

And I have here a collateral remark, which is of some importance ; while I alluded to the same fact as to Neuralgia in general, on a former occasion. It is frequently mentioned in medical writings, that the pain of toothach, when recurring severely for many years, destroys the constitution ; and this effect has been attributed to the severity of the pain. The constitutional disease here alluded to, is, doubtless, great ; but as I formerly hinted, it is not produced by other

pains, nor is there any thing in pure pain to account for the species of injury in question. This is one of the errors, far too common in physic, which flow from a minute or petty attention to an obvious symptom, to the neglect of generalization. In these cases, the constitutional disease in question will invariably be found to be a chronic intermittent, sometimes united to visceral affection, and to be thus, rather the cause of the toothach than its effects; the former being, at least the great disorder, of which the pain is but a portion or a symptom. And should the toothach destroy a patient, or shorten his days, as it is said to have done, it is easy to see to what causes such effects are to be attributed; while such erroneous and trifling judgments in cases of such a nature as this, are even more unpardonable. But I must withdraw from a criticism which, did I pursue it, might involve a censure on many to whom I must look with respect on other points, however they may have suffered themselves to be misled on this one, by following, from habit, minds inferior to their own.

The general nervous affections which attend common toothach, are the same as those which occur in all the Neuralgiæ, and, similarly, in all the intermittents, whether simple or anomalous. It is remarked, even to familiarity, that the pain of toothach is peculiarly intolerable, or affects

singularly the whole body, and the mind also ; while, as far as pains can be measured or compared, it is not equal in quantity to that of wounds, or of various painful diseases, which do not equally affect the system, or are not equally intolerable and not thus productive of irritability and impatience. Under many severe pains, the mind retains its full powers ; and when the pain ceases, the inconvenience is over ; while the former is rarely the fact in the toothach, and still more rarely so in the habitual one. This is precisely what occurs in every case of Neuralgia, be it wherever it may ; and hence do the general sufferings, often undescribable, from periodical headach, Tic, or sciatica, resemble those which occur in severe toothach.

It surely must have been remarked by every one, that the physiognomical expression of a person labouring under toothach is peculiar, and unlike to that which occurs from gout, or the pain of wounds, or almost any other pain. Yet it is the same as that which takes place in Neuralgia, as an artist at least will immediately discover ; and what is more, it will be found to resemble, in an air of peculiar anxiety and of melancholy, united or separate, as also at some periods, in a paleness and shrinking and a peculiar greenish yellow or singularly sallow colour, that expression which characterizes the fit of inter-

mittent, as I have more than once remarked respecting the Neuralgiæ in general. And if the remark be rather curious or amusing than useful or necessary, the character of that physiognomy is well evinced as it is accurately delineated, by that acute observer of expression, Hogarth, in his strolling actors; nor while I point out, in his Finchley, another expression for another kind of suffering not less correctly represented, need I remind the acuter members of my own profession, how often they can themselves decide on the exact nature of a painful disease, merely by the face of the patient, as I have often decided on the presence of stone, on the first, and even on a distant view of the countenance.

To the peculiar situation of the pain, in the body or substance of a nerve, and communicating with the whole nervous system, we must probably look for these peculiarities, whatever the exact cause may be; and thus the toothach is also often attended by hysteria, even amounting to a fit, by lacrymation, or a tendency to it, and by a species of debility of mind, equally remarkable in every Neuralgia, and, in fact, in all the intermittent diseases under whatever form. Where dyspeptic and hypochondriacal symptoms occur in patients subject to habitual toothach, as is by no means unusual, the explanation becomes thus easy; and thus also we can explain, how it so

often happens in females, that this disorder, when frequent and durable, is attended by menstrual derangements. In reality, in every patient subject to frequent and severe toothachs, there is a great deal of general disorder of various kinds; and it can always be traced, with due care, to a separate, if, in a certain sense, connected constitutional disease, which is that variety of remittent or intermittent amply described in former parts of this essay.

There is yet one familiar fact occurring in toothach, which also connects it with Neuralgia and intermittent; and though it may appear trifling as a proof of identity, it is too remarkable to be passed without notice. It is removed by charms; a practice not uncommon in remote parts of the country: and thus it is also that the sight of the operator or of the preparation for extraction, often puts a stop to it, and when not habitual, even permanently. Thus also is it frequently cured by change of place or habits, as it is removed by the occurrence of another disease or pain: remedies, all of them, which occasionally, and perhaps as often, produce the same effects in other Neuralgiæ and in intermittents. That occupation, an intense resolution directed to some other, and exciting object, and other similar mental operations diverting the attention, also dissipate the toothach, is not less

familiar as a fact, while it continues the analogous illustration. And if this is fully known to the sufferers under this disorder, while, very commonly, exceedingly conspicuous when we attend to the effects, relatively, of the solitude of night and of the conversation or occupations of the day, it is a remark of positive utility, not only in this disease but in ordinary Neuralgia. And if it is true, simply, that to light a candle in the night will sometimes remove a toothach, as the excitement of sending for an operator will often do, much more effectually, this is but a small advantage compared to that which may be derived in a manner which I may call a negative one, both in this disease and in Neuralgia. If, in every case, to direct the attention strongly to any important organ, such as the heart or the stomach, will frequently derange its action, very easily so when already deranged, though even acting thus when those organs are in health, and if this is, actually, a not uncommon cause of dyspepsia or indigestion, in those empirical and selfish persons who are perpetually considering about what they eat, or amusing society with their ailments, when at table, so is it true that in all the Neuralgiæ, the pain is materially augmented by attending to it and talking of it, as it is diminished or dissipated by a strong effort of the reverse nature. Hence it is that the feeble-

mind and the selfish suffer most from all the diseases of this class, as do those therefore, impliedly, who most torment their physicians; this conduct being quite as much the cause of the severity of the disorder, as it is the effect: and hence also it is, in a great measure, that females suffer most from it, though in them we may also allow somewhat for a nervous system more irritable.

How this may be applied to use, I need not say, and lest I dwell too long on these resemblances, I will now pass to some more local ones; while some of these are of moment, as they relate to the errors which have occurred, and do occur, daily and invariably, respecting this disease.

If, occasionally, the pain is confined rigidly to one tooth, a fact however which occurs chiefly where the tooth is carious and the disease is the produce of local injury, it is much more common for it to extend beyond that. Thus, like the Neuralgia elsewhere, the severe pain will be in one point, of greater or less dimensions, while a more moderate pain extends along the courses of the nerves, even to great distances. And in some cases, where the chief pain is not particularly pungent, the secondary one may be such that the patient can scarcely say where it really does lie; while, further, it is subject to wander about the

face, or to be most intense at times in one part and at others in another. Thus does common toothach, like Neuralgia, often pass into headach; as, further, the patient may be so equally occupied between headach and toothach, as not to know precisely by what he is most grieved. In such cases as this, nothing but inveterate habit and inattention, added to the weight of a name, to that which is always the most weighty argument to the multitude, could prevent practitioners from referring the disorder to Neuralgia instead of toothach; had they indeed known what Neuralgia itself was.

I was about to say that this diffusion of the pain of toothach was a much more important object of attention than it might appear at first sight: I should rather say that it would have been one, had Neuralgia itself been better known, and will be one whenever it shall be understood. That importance relates to the treatment; and though I must in some measure infringe on my arrangement by alluding to this part of the subject partially, before I have had an opportunity of treating it generally, it is unavoidable; as with this, is almost the whole question of error as to practice, concerned. And here therefore, I cannot avoid pointing out the whole system of erroneous practice in toothach, as without this, I could not in fact finish the history of this dis-



order, and as I have completed, as far as I here can, all the remarks which I had to make on the history of simple irregular toothach as connected with Neuralgia of the same character. In this inquiry, I need not separate what belongs to the case of carious teeth, or Neuralgia of a tooth from injury, from those where no such disorder exists ; since this would be to incur repetition to little purpose. It is far from agreeable to be forced into a criticism implying a censure so wide ; though much less unpleasant to argue against general than individual error ; while it requires some effort of resolution to oppose, alone, an universal belief and a practice as universal, and to abide the consequences that must ensue.

It is not uncommon for the disease, the Neuralgia, to be situated in one or more of the leading branches which supply, by their minuter ramifications, a number of teeth. In this case, the pain may actually extend into many teeth, or to one half of a row, in either jaw, or in both jaws, or to the whole row, in either, or even in both jaws ; though cases where it occupies more than the whole of one row are rare, while this accident seems to occur more frequently in the upper than in the lower jaw. It may also, in this case, affect but two teeth, or even one ; or, in such a case as the last, there may be a neural-

gic pain of the cheek or face, with a decided toothach superadded, in a single tooth, which, in the present inquiry, I shall presume to be sound.

In all such cases, varying in many more ways than it is necessary to specify, the greatest severity of the pain may be either in the teeth, or, beyond those, in the jaw; while it will be sympathetic; or exist as an extension of the principal pain, in either of these parts, reversely. But in all cases in practice, the teeth are accused as the seat of the disorder, except where, among surgeons more anatomical and profound, it is referred to a disease in the antrum maxillare, should the seat be the upper jaw. A few, with still more profundity, refer it to an abscess or a series of abscesses at the roots of the teeth; while there may possibly be other still more ingenious modes of accounting for such disorders. Unfortunately, the existence of such a disease as that of the antrum maxillare, serves to cover and protect one of these theories as to cases of Neuralgia, as there are also rare cases in justification of the other view.

That such a disorder as I have described, so decided as are these varieties, should not be recognised as Neuralgia, might be matter of surprise, considering that its characters and the collateral symptoms are always sufficiently obvious,

and, in the severer cases, so marked and prominent, that any one who had ever seen Neuralgia, who had even the idea of such a disorder in his mind, could scarcely mistake it. But the surprise will diminish when we recollect that even Neuralgia itself is not very widely known or recognised as a general disease, or that its nature is not understood and its extent and variations not suspected; that, by many, it is hardly admitted or known to exist under any but its marked and popular form of Tic. We cannot therefore expect a correct judgment respecting even such toothach as I have now described, when there is no general theory, no foundation on which that discrimination can be founded, or no philosophy respecting its seat or nature.

The practice which follows, is that which might be expected; and is that empirical and hereditary practice which, commenced perhaps with physic itself, has been continued without inquiry. It consists in a number of local applications, generally of a stimulant nature; or, if there is a portion of the inflammatory action of the membranes present, it may be extended to other means which I need not now notice. But the great resource, the fundamental remedy, is extraction; and it is now my business to inquire what the effect of this is.

If excision or destruction of the nerve or of its

diseased portion had proved on trial to be that remedy for common Neuralgia which was once hoped, we might have given to those who favour or use extraction in the cases under review, the credit of some reasoning, and have supposed that, on a similar principle, it was their intention to destroy the affected nerves in the teeth. But even this much of reasoning cannot be well granted; and the abettors of this practice must be content to reflect that they hope to pull the disease out together with the tooth, on the same principle, if principle that can be called, which exterminates the carious tooth, and its pain together, in the same manner. It is simply the vulgar and mechanical principle of amputation, misapplied; though few perhaps have ever considered the reasons for a clumsy piece of philosophy, adopted before men began to think, and followed because it is established. Assuredly, no physician, no one capable of reasoning, would attempt, on principle, to remove the pain produced by, and in, a diseased branch of a nerve, by removing the teeth which are supplied from its minuter ramifications; since it would be as if he were to attempt the cure of sciatica by cutting off the toes. If that is now done daily, it is because the nature and seat of the toothach in question have not been understood; and it must therefore be expected that the establishment of a just theory will put

an end to a practice as unphilosophical as it is, generally, inefficacious, and in every case inconvenient; mischievous and vexatious in every way, when the teeth are sacrificed and the disorder remains uncured, as is the general event.

And I may add also, that such practices as consist in drawing the tooth and replacing it, so as to separate the nerve for ever from the tooth itself, or in the destruction of the nerve by caustics or cauteries, or in a still more recent invention, which divides the nervous branch and suffers the tooth to remain, are equally founded on false principles, because, like the division of the nerve in ordinary Neuralgia, they cannot prevent the return of the disease, otherwise than as, in the case of a carious tooth, they may, like stuffing or filling the cavity, prevent the future operations of the exciting cause, which, in the case of exposed nerves, so often induces a fit of the disorder.

But it is necessary to examine more particularly what are the consequences, in practice, of this system. If I lately alluded to one case where delicacy forbade me to name the unfortunate individual, I could easily detail twenty, thirty, more, cases, where entire rows of teeth have been sacrificed to this practice, yet without procuring the slightest relief. But there is scarcely a practitioner who has not met with many instances of the same nature; and I need not therefore relate

the particulars of any one, since most of my readers could supply as much from their own experience. Even in common life, there are few persons who have not an acquaintance who has thus suffered in a less or greater degree; so common are the disease and the practice both, and such the perseverance, in what is equally useless and injurious, which results from ignorance united to habit.

If I have used the term perseverance, there is nothing perhaps so remarkable in this perseverance in wrong, as when it is exerted on a single case: and that this is done daily, is a sufficient proof of the rooted ignorance on this subject; since I have never yet met an instance where the propriety at least of this expedient was questioned, where it was not held out as the legitimate mode of cure, at least in the last resource. Thus, if it sometimes has happened that four, five, six, or more teeth have been drawn in the course of a few days, the sacrifice has been made in a much more gradual manner, and weeks, months, or even years, may pass before it is completed. It might be supposed here, that there would be abundant time for reflection to intervene, and and that a practice proved to be unsuccessful on the individual himself, would not be thus persisted in, even did the practitioner forget that it had rarely succeeded in other cases. But so it is;

and they who follow this blind route must explain their own motives as best they can, since they would scarcely thank another for making the attempt.

As I defer the question of carious teeth for the present, the simplest case of this nature is that where there is a pain referred to a single sound tooth; in which, if it does sometimes happen that the pain is thus rigidly limited, it more commonly extends along the cheek or jaw, marking the neuralgic action; while, not unfrequently, the real seat of the pain is there, and the tooth suffers only by extension of it, as in the other cases of Neuralgia formerly described.

When extraction is resorted to for this kind of toothach, there is sometimes a cure, the cause of which I shall hereafter attempt to explain when speaking of carious teeth; and every cure, of course, unfortunately maintains the practice, while it is seldom inquired how often the operation fails. Very commonly however, it happens, that immediately after extraction, the patient perceives that the pain continues, or is in the next tooth or teeth; in which case the operator is very often unjustly accused of having extracted the wrong one; when a resolute and confiding patient will sometimes submit to a second or a third loss, though even then the pain will continue. It may perhaps continue still in

the neighbouring teeth; though more generally, where this pain has been limited as to the teeth themselves, it disappears from the places of those which have been extracted, continuing in the jaw, or in the leading branch of the nerve. The toothach is then sometimes reputed to have been cured; and the pain of the face is attributed to the operation, or to rheumatism, and is expected to subside: but as it would be endless to detail all these events, I shall not dwell on them.

What is more important here, and also frequent, there is perhaps a temporary cure, of greater or less duration: and in a new case of Neuralgia, or toothach, as in all other recent cases of that disease, as of Intermittent, the first cure may really be a permanent one; giving greater encouragement, and productive of more and wider evil for the future. But if the disease has been of any duration, or repeated, if the neuralgic habit is established, or the patient is in that chronic state of subjection to relapses, or of susceptibility, which occurs in all the neuralgic and intermittent disorders, the toothach returns at some other time, more or less distant; while, very generally, the same remedy is repeated, perhaps with success, possibly not, and the more readily if it has succeeded before. Thus, as the Neuralgia continues to return, whether spontaneously, as a disease of habit, or from the appli-



cation of casual exciting causes, the same operations are repeated in succession, till whole ranges of teeth disappear before the instrument; until at length perhaps the disorder ceases for life, from those changes in the constitution which so often end the habit of all Neuralgia and of intermittent.

Independently of the pain of these operations, trifling, it must be admitted, when compared to that of the disorder, the inconveniences produced by the loss of teeth need not be pointed out, numerous as they are; to say nothing of the consequent deformity, which, in the case of young or beautiful females especially, is often highly vexatious. And all this is materially increased when, as is most generally the case, the cure is not effected, or is only temporary. And how common both the disease and the practice are, is most palpable; when we scarcely meet an individual in society, who has not suffered the loss of some teeth in this manner, sometimes indeed justified comparatively by previous caries: though I shall hereafter show that the practice is nearly as much misplaced in one case as in the other.

I know no means of explaining why the neuralgic pain in question should be more common in the upper jaw than the lower, nor why it should be most frequent, when it affects the teeth, in the smaller molares than in any other. Such however is the fact; and while the foremost

of those is the most common place of that pain, from this also it extends successively backwards to the others; but generally stopping short of the last, as it rarely also advances forwards to the canine: it being only in the severest cases that the front ones are affected, and the lower jaw generally suffering much less extensively and much more rarely. It is further remarkable, that the pain often attacks, in succession, the opposite or corresponding small molares first; either terminating with them, or gradually extending backwards during other relapses, along the other ones on each side alternately, and very generally in the upper jaw alone. If the ramification of the superior maxillary nerves throw a sort of light on this, it does not explain why any branches should be more subject to Neuralgia than others; and we must, for the present, rest content with the fact. Hence it is that we often meet persons in whom each upper small molaris is wanting, as we find others who want two or three more on each side; a cause of considerable deformity in young females, in whom also this kind of Neuralgia or toothach appears to be more frequent than in the other sex. And I believe it is true generally, that females are more subject to the several Neuralgias of the face than males, perhaps indeed to the disorder in general, if we

except sciatica; as with them, "nervous" headaches are more frequent: a fact arising probably from that greater sensibility of the nervous system which shows itself in so many different ways.

On this let me make one general observation, which I think is of some importance to all those who are subject to the chronic intermittent and neuralgic diseases under whatever form. It was inadvertently omitted in the former volume, where it would have found an apter place; but it is better that it should appear here than be suppressed altogether.

It is admitted that the irritability (as it is called) of the nervous system is increased or encouraged by a sedentary life, and also by mental rather than bodily occupation. By this also is comparative muscular debility induced or increased; as both these conditions are remedied by exercise or labour, under the usual recommendations as to general health. Hence it is that these diseases, on the average, are more severe among those who live in the former manner; a fact which assists in explaining the greater suffering of females and of the opulent classes: and, what is perhaps of much greater importance than any consideration belonging to Neuralgiæ, such also is very certainly the fact as to chronic remittents and intermittents. Thus it is, that from the

habit of labour, and the consequent general strength of the muscles, or perhaps, the inirritability also of the nervous system hence maintained, the rural population of the pestilential districts of Europe are enabled to work during the progress of habitual fevers which would utterly disable a sedentary or opulent person; while I have often also had occasion to remark, as a much more striking proof, that in the same individual, subject to chronic intermittent through years, any one attack during the habits of labour or exercise, has produced little disability, while the same occurring during a period of sedentary seclusion, has, as invariably, destroyed all the muscular powers, or produced a state of debility for which no state of the fever itself could produce a justification. The value of this fact in practice, and the practice which ought to be founded on it, I need not point out, as it is abundantly obvious. To return.

The more severe Neuralgia of the upper jaw affecting the teeth, is sometimes considered as a toothach simply, at others ascribed to disease in the antrum maxillare, as I already remarked. That extraction, with perforation if necessary, is the right mode of cure here, presuming this disease actually to be present, is true; but that is a point which might at least be ascertained by the loss of one tooth. Yet even such an experiment

is scarcely pardonable ; since the characters of Neuralgia, and the collateral symptoms as I have already described them, are so marked, that the practitioner who commits this error is indefensible, though it is made every day. The general practice here, as before, is to extract teeth ; and when the pain is sufficiently severe, the patient sufficiently submissive or resolute, and the practitioner sufficiently ignorant, even the whole of the teeth are sometimes drawn out without mercy or reflection, and not unfrequently without producing the cure that has been so dearly attempted. In other cases, as I have just remarked, the teeth are drawn more gradually, as circumstances happen ; the failure producing no warning : and thus have I seen a patient submitting in succession, month after month and year after year, till not one tooth remained ; till nothing remained but the pain, and which remains at this hour, because it never was in the teeth. It is far more unpardonable when this practice is adopted in cases where the pain is truly periodical ; but so little is the knowledge of even that remarkable variety diffused, and so mechanical the routines of practice, that I have seen at least an equal number of cases, where all this violence has been resorted to, and where the disorder was not merely rigidly periodical, but even attended with marked intermittent fever ; when a few days or weeks of ar-

senic or bark, or of the other remedies of Neuralgia were afterwards sufficient to effect the cure which all this loss of teeth had left untouched.

But I have said enough on the subject of these errors ; while I cannot think that I have said too much, considering the vast mass of inconvenience as well as suffering to which they daily give rise, and of the termination of which there are no hopes, unless what I have here said shall in time make an impression. On the average of cases, perhaps there are three fourths where the cure of the pain is not obtained ; so that, to the original disease, is added all the artificial evil. And even those who do purchase the loss of pain by the loss of teeth, pay commonly a deep penalty ; since, in the same cases, the common remedies of Neuralgia would have removed the disorder and preserved these organs. If the labour which I have bestowed on even the whole of this essay, shall do no more than lead to a reform in this department of practice, it will be well repaid ; while the consciousness of having effected good is the only reward which he who does not turn his knowledge to professional purposes can ever receive : and if I cannot help feeling that I shall deserve the thanks, at least of the rising generation of youth and beauty, though not till praise or censure will alike be indifferent,

I must, in the hope of that hollow recompence, submit to what every man ought to expect, who, by proposing to change a general belief, is thought to insinuate that he is better informed than the great multitude.

That I may not however have to recur to the subject of extraction again, I shall extend these remarks on it, to the case of carious teeth ; though the nature of this variety of Neuralgia has not yet been examined.

It may happen that every circumstance of pain, and every variation that I have described in the case of sound teeth, may occur in that of carious ones ; or, under all the foregoing symptoms, a single tooth, or more teeth, may be carious, while the progress and characters of the disease are the same. In reality, the caries must be ranked as an exciting cause, not considered as a disease, or rather, not as The disease ; a proposition which I shall soon explain.

In these cases, it will sometimes happen that the pain is really limited to the diseased tooth or teeth ; but it is also very common for it to extend beyond that, to the neighbouring or to other ones, and also to the nerves of the face, to any extent that it can occur in Neuralgia. Whatever be the circumstances, the disordered tooth is always conceived to be the seat of the disease ; and there is here therefore less hesitation in applying

the common remedy, while, in reality, these are the cases whence the loss of teeth so general in society chiefly arises, since there are, even professed dentists who, from whatever views, are unwilling now to extract sound teeth.

Now, if the operation often fails in curing the disorder in such cases, it succeeds in many instances ; while it is this success, apparently, which has confirmed the practice in question, as it has aided in confirming the erroneous theory of toothach. It will be useful to inquire in what causes success and failure lie ; since thus we may approach to a correct view of the utility of the remedy, and of its opposed inutility or disadvantages ; though I can only conjecture what these are, or rather, offer a very partial explanation.

As I shall presently show, I consider that the exposure of the sensible interior of the tooth, or of the nerve as it is commonly called, which occurs in a perfectly carious one, is an exciting cause of Neuralgia in that nerve ; or rather, that, in this state, the nerve itself is more easily under the influence of injury than in its natural condition ; while it may also be positively or permanently diseased at that point, as it is in common Neuralgia, whatever be the nature of that obscure derangement, and thus susceptible of occasional fits of pain, from the same unknown and constitutional causes that excite the pain of com-



mon Neuralgia in any part. Some minute portion of the extremity may even be in a state of ulceration, or partake in some manner with the general ulcer; thus bearing an analogy which I already suggested, to a similar occurrence in ordinary ulcers, similarly productive of Neuralgia.

Now, in this case, extraction may cure the disorder in two ways. If the exposure of the nerve is merely an occasional exciting cause, or if the extremity even partakes of the ulcer, and that there is no further disease of the nerve, no fixed disposition to Neuralgia in any other portion of it, or no constitutional tendency, its effect is to secure that part from future injury, by removing that body, the tooth, which maintained it in a state of exposure, and thus allowing it to be secured and buried by the healing process which follows. And this cure is effectual and permanent, whenever these favourable circumstances are present; though it will still be a question whether that cure should not preferably be attempted by the same means which remove other Neuralgiæ, and which rarely fail in new cases, however uncertain their success may be in habitual or chronic ones.

The other mode in which extraction appears at times to cure toothach, is by exciting another pain or temporary disorder, or by the shock which the operation and the alarm together give to the

constitution ; effects analogous to those which happen in other Neuralgiæ and in intermittent ; as I formerly explained. Thus it may, in this way, cure permanently a new disease, or one not become habitual ; and, on this principle, it also removes occasionally the toothach where the tooth is not carious ; while if, in this case also, the Neuralgia is casual, or not fixed, the cure may be permanent ; just as a permanent cure of intermittent is obtained in similar and other modes, when it has not had time to become habitual. But here also, as on the former principle, and whether the tooth be sound or diseased, it is a violent and an inexpedient remedy ; since a Neuralgia that can be cured by such a cause, would also be removed by the usual medicines. At any rate, it should be a last resource, even in the case of a carious tooth, and far more in that of a sound one.

On the other hand, where there is a tendency to Neuralgia in the habit, or the disease is habitual or chronic, in the form of toothach or in any other form, it may be the effect of extraction, in either way, to remove the fit of pain, or to cure the particular paroxysm or series of paroxysms, just as we remove the relapses of a chronic intermittent ; while the disease returns again, whenever the unknown constitutional causes, or the fresh application of exciting ones, brings it into

action. Here it is, that, in the usual inconsiderate practice, the remedy is repeated because it succeeded before; and thus it may be repeated again and again, because always temporarily successful; and hence also it is, that a succession of fits of toothach attended by carious teeth, leads to that succession of operations which this species of success seems, though falsely, to justify as much as does the state of the teeth.

Now, on the contrary, it is here, that better reasoning would show that there was a deeper cause present, and would abandon a method of cure which is temporary and partial while it is severe and inconvenient; and hence we should rather derive a general rule, though there may be exceptions to it, exactly the reverse of the present one. It should be, that wherever, after one extraction, the disease returns, this plan of cure should be abandoned, and the attempt at a real cure of the original and fixed disease, made by means of the remedies of Neuralgia; while the fits of pain also might be suspended or diverted for a time, as they are well known to be in various ways, by any remedies short of extraction. And there is infinitely less excuse for persevering in this practice in those, very common cases, where the pain continues in spite of extraction; as we may then be quite certain, that, after one failure, it is almost hopeless to have recourse again to

this method of cure. Least of all perhaps is there an excuse, when, from the existence of a great number of carious teeth, the whole local evil cannot be extinguished without serious loss and inconvenience, and when, even then, we are by no means certain of effecting a cure ; as experience proves every day.

If this reasoning be correct as to carious teeth in common irregular toothach, it is far more unexceptionable in the case of the periodical disease ; since the cause is then so much more obvious, and since the remedies of intermittent and Neuralgia are also more efficacious than in the other varieties : as is true of all the modes of those disorders, always most amenable to remedies when most regular. Nor in any case, should extraction be resorted to until the remedies of Neuralgia have been fairly tried ; as they never are, since the disorder as yet is not known as such : while of their efficacy in all the varieties, I have experience which cannot deceive me.

It will be plain now, that the extraction of a tooth cannot very often be a justifiable practice on account of pain : while I am fully convinced that were this disorder always treated as a Neuralgia, empirically, and without consideration of causes, or varieties, or aught else, without in short reasoning at all on the subject, (which to the multitude is the most easy and acceptable manner,)

thousands, or rather millions of teeth would be saved, and perhaps also thousands of cases of toothach cured, which are now the torment of thousands, in spite of extraction. And as it is found that Neuralgia and intermittent are most easily cured, even permanently, when recent, or before habit has rendered them chronic and refractory, so it would be the right policy to commence with this system at once, and on the first appearance of the disease ; since we have much less hope of benefit in ancient cases.

It is easy however to imagine a case where early extraction might be advisable ; and it is perhaps the only one in which it can really be recommended, while it would require some attention to ascertain the propriety. If it should appear that a new case of toothach, and, perhaps especially, in a young person, is produced absolutely from a badly carious tooth, and from its exposure, it is possible that its frequent recurrence from external exciting causes, might induce the habit of Neuralgia in the constitution, and thus lead to an inveterate disease. Should such a case occur, and prove refractory to the remedies of Neuralgia, or to other local means, it might be prudent to take away the tooth, for the purpose of securing the nerve ; and thus, by removing at once the only or chief cause, ensure the avoidance of the evil to be dreaded, and the permanent

cure. Such accuracy of views can scarcely however be expected while this disease is to be judged of by mechanical dentists; and it would unquestionably be for the interest of the public, to reserve for their medical attendants what belongs to diseases, and confine the mechanics to their own, proper, sphere. At present, no more inquiry or judgment is exerted on a case of toothach than on the cleaning of a tooth; and assuredly, a constitutional disease such as, I trust, I have proved this to be, is not one that is very likely to be understood by the persons thus employed, or, even if they were really better informed, in the way that they are consulted; since that consultation is rarely more than an order for extraction. As to other reasons for extracting carious teeth, it is not my intention to interfere in this department of surgery; however convinced I may feel of the groundless or false reasons so often urged in defence of it.

I have now, from the obvious necessity of inverting the order of this discussion, to save repetition, said so much respecting the toothach as it arises from carious teeth, that I have left little to add on that subject; while that which remains relates chiefly to their mode of action in this case.

I showed in a former part of this essay, that the local injury of a nerve could produce a regular periodical Neuralgia; while I further sug-

gested, what indeed is almost obvious, that the irregular pains produced by such a cause ought also to be considered of the same nature. Now these are cases exactly analogous to the toothach from a carious tooth ; and thus we can see, how, from such a cause, even a periodical toothach might be produced. The extremity of the ramification supplying the tooth is, if not an injured nerve, an exposed one, susceptible of occasional injury, and also, it is probable, of inflammation : while it is not very improbable that the exciting disorder in the nerve in every case, the permanent cause which produces occasional fits of pain, is, if not a species of inflammation, something analogous to it. Hence, if the prick of a needle in the finger, or any other injury, can excite true Neuralgia, in the same or in a distant part, as I have shown that it can do, it is easy to imagine how, not only simple toothach of the part, but even Neuralgia in the face, may be produced by a carious tooth. The analogy is perfect, or rather it is an absolute identity : and it is one, further, which serves to confirm the whole theory of toothach as I have now given it ; so far from controverting it, as has been retorted on myself. And in such a case, should any tendency to the disease be present, or should there be a previous habit of Neuralgia in the constitution generally, or in the neighbouring parts, such a cause, per-

manent at once and occasional, might be the perpetually renovating occasional cause of a serious disorder, of which it would be esteemed the sole one. And the perpetual obstacle to conviction in this case, is nothing but the simplest of all fallacies, a term: or it is the mistaking of one part for another, or the substitution of the visible screen of an object for the object itself which it covers. Let the objector but once persuade himself, or recollect, that a tooth is insensible, that it is nothing, that the nerve is every thing, the seat of life as well as of pain, and he can have no further difficulty; since it must be indifferent where that nerve lies, and since it is the same law, operating on the same thing, but in a different place.

I have but one more remark to add before I pass from a subject, which, if it has occupied much space, must seek its apology in its former obscurity and in its importance. Carious teeth do not invariably produce toothach, far from it; even when we are sure that the sensible parts are equally exposed, and when the proof of this is perfect, from the pain which an injury, or the contact of a stimulating substance, produces. So far from that, we find thousands wasting away through years, and with the sensible part exposed the whole time, and yet without exciting pain; while, when excited, even violently, by accident



or design, for a few minutes or hours, it terminates, not to recur again but from fresh injury. The most common reasoning should therefore show, that the disease does not essentially consist in such exposure or injury, but that something else is present, and that this is but an occasional cause. That fundamental cause lies in the nerve or the nervous system, as in all Neuralgiæ: and while this indicates the want of observation under which the disorder has always been considered and treated, it aids in confirming the views which I have held out respecting its nature, its constitutional nature, if I may use that term; as it justifies the mode of treatment by which the cure, in the view that I have taken of it, ought to be attempted. What else relates to that, however, beyond what I have already been compelled to remark, I shall defer till I have considered the last variety, the inflammatory or rheumatic toothach, or the rheumatism of the face.

Yet not without making one remark. Should I propose to treat the toothach from caries by the same remedies which are resorted to for Neuralgias, or for toothach without caries, it is a very natural objection to ask how a cure can be thus expected when the disease is local, or thus far at least, of a local nature. The answer ought already to be obvious; and it is, that Neuralgia arising from an injury to a nerve, in a

finger, or elsewhere, is thus as readily cured as any other variety. All that can be admitted therefore in this case is; that if the nerve of the tooth is injured or exposed, it may renew the disorder again, after having been removed; as being an exciting cause always ready to act: though it is far from improbable that a permanent cure may be effected by the operation of these remedies on the nervous system at large, since I have just shown that some condition of this must conspire with the local disease in the production of toothach.

I formerly showed that it was a frequent effect of Neuralgia to excite an action in the minute arteries, tending in some cases to inflammation, and as I shall hereafter show, sometimes actually producing it. I have further compared, and must for the present purpose compare, again, that action of the arteries in a part, to the effect which takes place, of an analogous nature, in the whole arterial system during the paroxysm of intermittent. I have also shown, that in the Neuralgia of the rectum and in the periodical headach, the neuralgic pain is confined to the minutest ramifications of the nerves, avoiding the larger branches; and that in this case also, the arteries of the same parts put on an inflammatory or excited action. It has further and lastly been shown, that in intermittent, periodical and transient rheu-

matism, or inflammation, can take place in a part, without decided neuralgic pain, as such inflammation may also become permanent; and I have pointed out the general analogy of these inflammations, including those of the stomach and bowels. This I am inclined to distinguish by the term neuralgic inflammation, in all cases; conceiving that, even in the last, mutually connected, and unlimited with respect to each other, as all these are, it is from such an affection of the very minutest ramifications supplying the capillary arteries, that this effect proceeds.

But whether we choose to apply the term neuralgic or not to this species of inflammation, its connection with intermittent fever has been amply demonstrated; as its similar connection with Neuralgia will be more fully shown hereafter; while it is also familiarly subject to paroxysms with intervals, as regular and decided as are those of the best marked intermittent fever. But it is sufficient to remind the reader of these facts; while it ought to be superfluous to repeat and array them again, for the purpose of illustrating the parallel disorders under review, or the rheumatic toothach under its several forms.

Not to refine more than is necessary, it will be sufficient to consider the rheumatic disease in question under two varieties; namely, as connected with a carious tooth, and as independent

of that; while, under each, it may be strictly periodical, or irregular, as is the simpler toothach itself.

But as I have already described the various modes under which mere toothach is periodical, as also its irregularities, while I have further detailed the collateral symptoms which attend it and mark its character, and moreover, attempted to explain the causes of such irregularities, it will be unnecessary to go over all this ground again; since the statements then made apply equally to the rheumatic or inflammatory form of the disease, and that, whether there is a carious tooth present or not.

Supposing a carious tooth to be present, there are two modes in which the rheumatic inflammation may occur. If the pain has commenced in the tooth, the inflammation may be determined or produced by that; and we may then conceive it as the produce of the Neuralgia in the main nervous branch supplying the tooth; an excess of that action which so generally occurs in the neighbouring vessels in every Neuralgia. But the rheumatic or inflammatory action may also be the prime or leading disorder, while the pain of the tooth is produced by its extension. In this case we may compare it with the local rheumatisms formerly described as connected

with intermittent, of which it is in reality a frequent variety.

If on the other hand, there is no carious tooth, the rheumatic inflammation in question bears still more strongly the marks of an original disease; while in this case, its characters and origin are those just described. And here, if it is most generally a simple disease, a merely painful state of the membranes of the face, attended with inflammation and swelling, or not, it sometimes also excites a distinct neuralgic pain in addition, or else appears to originate in one; such cases being exact parallels to those just described where a carious tooth is present.

Having made these necessary distinctions, what remains of the description may be considered as appertaining to all these varieties; as it is unnecessary to prolong this account by a further multiplication of variations. Generally, the disease is the same under all its forms; and the important object here, is to establish that generic character, for the sake of the practice depending on it, as well as for the purpose of completing the theory of this branch of the Neuralgia.

In the rheumatism of the face, the inflammatory state is sometimes so imperfect and transitory, that it would rather be considered a painful disease than an inflammatory one; and this is particularly the case where it is periodical, or

paroxysmatic, under any form, however irregular. In such cases, it approximates intimately in its character to pure Neuralgia; and may in fact be considered as a Neuralgia extending through a great number of the very minutest and unassignable nerves that supply the membranes. It is, but for its place, a headach; or, the theory of the disease, *mutatis mutandis*, is that of the analogous headachs; while, in practice, the two are often so united, or the limits of separation so loosely drawn, that a patient is sometimes at a loss which name to give to his disorder. If these are the cases in which it is most apt to be regularly periodical, they are not the exclusive ones, as I shall presently show.

When the disorder proceeds to actual inflammation, it produces those well known effects which I need not describe; and in these cases the disease generally lasts a definite time without interruption; though even here it is common to find quotidian exacerbations of the pain, and sometimes also, of the swelling. Yet as I just insinuated, even this disorder is sometimes strictly periodical; as I have known some cases where a distinct swelling occurred daily, subsiding again; in two of which, the disorder under this form lasted for some years, but with those intervals which occur in almost all very chronic intermittents. And in both of these, if there were symp-

toms of an equally regular intermittent fever present; the disease was, in one, not only a marked quotidian, but one of an extremely severe character, enduring, with interruptions, for seven or eight years, while the swelling and pain of the face, equally regular for the most part, often terminated in abscesses in the gums, such as are of familiar occurrence in this disorder. It scarcely however requires such cases as this, to prove the neuralgic character of this disorder and its connection with intermittent. All the circumstances show that the view here given is a just one; and whoever shall now study the cases that may come under his hands, with this theory, will soon convince himself that it is so.

In the ordinary current of practice, this is the history and explanation of those very common cases, where we find certain persons subject, as it is termed, to swelled faces; and if any physician will register, after careful examination, and afterwards review, a certain number of those cases, he will not fail to become convinced of all those peculiarities by which the disease is associated in the manner that I have been here attempting to prove. Let this however be done with the intention of trying the truth of this theory; without which, the characteristic symptoms might be overlooked, as, under habit, they so easily are. And as a proof of this, of the very cause which

has so long thrown obscurity over this as over all the Neuralgiæ, I may observe that in the case to which I have just alluded, where the patient was subject to "swelled face" during a period of more than seven years, almost daily, so as to be utterly disabled, the intermittent nature of the disease, and the fever connected with it, had never once been observed; while a mere cross-examination by means of a letter, was sufficient to detect a truth which was immediately confirmed by the entire cure of the disease through arsenic and bark.

The formation of abscesses is perhaps the most singular circumstance attending this inflammation; while it is one that I do not pretend to account for, occurring as it does when a tooth is not carious, though far more frequent in this case. It is a fact that might be objected against the present view of the disease; but it is plain that it is of no peculiar moment as such, since the same objection would lie on the view of its being a rheumatism, seeing that there is no other proper rheumatism which terminates in this manner. If we cannot exactly account for it, we must suppose that it depends on some peculiarity in the structure or nature of the gums, not yet ascertained; a peculiarity which is evinced by the enormous length of time during which abscesses will continue to form in them, and in one point; a fact to which we have no exact parallel else-



where, of which I know. On this subject, I may indeed add, that I was long familiar with a case, where an abscess on one point of the gum, not equalling a pea in dimensions, collected and broke, every second or third day, during the space of twenty years. Yet let it be remarked as to this termination of the neuralgic or rheumatic inflammation, that the same event, abscess or suppuration, occurs also in the analogous inflammation of the eye; so that those physicians who consider this a rheumatic disease, will be as much at a loss to explain this peculiarity as myself, when I call it a neuralgic one and associate it with the disorder under review.

I have thus finished all that I think it necessary to say respecting the forms of toothach; and after the details that have been given, it can scarcely be necessary to offer further proofs of the truth of the theory which I have here laid down. The occasionally periodical or intermittent character of the disease in all its forms, has been established, while its actual connection in some cases, even with intermittent fever, has been shown: nor are there any irregularities in it which are not equally found to occur, in chronic intermittents especially, and particularly in the anomalous varieties, or in those that are attended by local symptoms. On the other hand, its identity with Neuralgia has been similarly and

even more clearly proved; while the examination of cases of this disease in other forms, will show that no anomalies or irregularities occur in toothach, that are not similarly found in every Neuralgia; no other at least than those which can be explained by the circumstance of frequent local injury arising from a carious tooth; while this is also countenanced by the parallel cases of Neuralgia in other nerves, arising from similar injuries. But I shall leave these facts and arguments to make such impression as they may; aware that, even should they be successful, it will require a long time to overcome prejudices so firmly rooted, as well in the minds of medical men as in those of the public at large, or to establish this as a branch of a general theory, when the very basis itself labours under the misfortune of novelty, and must also work its own way to acceptance.

Let me now however, in concluding, sum up the chief arguments as to toothach, in a condensed and somewhat more logical manner, since they will thus be more impressive than under the diffused illustration which I have been obliged to use in explaining the connections of all the varieties of this disorder. That they involve a series of pure syllogisms, *ought* to render them convincing; that this will do so, is a very different assertion.

Neuralgia is a pain occupying some point in the nerves of the face, among others; and it may occupy any point in any large branch which supplies the teeth, among other nerves of the face. The pain which it produces is the same pain, whatever be the nerve or part of that nerve affected. The pain of toothach is the same pain, and it is seated in an ultimate extremity of the branch which supplies the teeth, or in more. If that pain is not Neuralgia, then it must follow, that although every other point of that nerve, when pained, is suffering from Neuralgia, let that pain exist any where, from the brain even to the extremity, the very last, ultimate, point, thus suffering, suffers from a different disease. *Reductio ad absurdum.*

Neuralgia is regularly intermittent and periodical, or it becomes irregular, under various modes, and from causes, of which many are assignable. The same is true of toothach. Neuralgia is often, or perhaps generally, attended by a peculiar constitutional affection, ascertained to be a chronic intermittent, and when highly marked, there is a febrile paroxysm accompanying the pain. All this is true of toothach. Neuralgia alternates with intermittent fever, by relapses; so does toothach: it alternates with it by paroxysms, and toothach does the same. And in both, the types may be quotidian, tertian, and double

tertian, or perhaps more : while, in both, the disease may be similarly doubled ; or, being a double tertian, may consist of a paroxysm of the pure intermittent on one day, and of the Neuralgia, or of the toothach, on another.

Neuralgia is attended by heat, and by excitement of the minute arteries, accompanied by general diffused pain, or irritability, or both ; and so is toothach. Neuralgia and toothach are united, or simultaneous : or, the pain and the place of the pain may be such, that neither the physician nor the patient can determine what the disease ought to be called. Neuralgia passes into or produces toothach ; and, reversely toothach passes into or produces Neuralgia. The two pains alternate, in various modes ; or that which was Neuralgia at one period, be that, of day, hour, or minute, or even instant, may be toothach in the next ; or the reverse.

Neuralgia is produced by the injury of a nerve. So is toothach : and this is the case of a carious tooth. And if toothach from this cause is especially frequent, it is that the caries of a tooth is very common ; and that there are not, in external circumstances, or in the body, any frequent means of thus injuring, either through accident or disease, the branch of a nerve elsewhere.

Toothach, when regular, is cured by the same remedies as regular Neuralgia. In many

instances it is thus cured even when irregular : and if such cure is not more frequent, it is because physicians have not thus attempted it : not having taken that view of this disease which I have here endeavoured to establish.

I might now treat of the cure of toothach separately, before proceeding to what little remains respecting the diseases of this class. But I have already examined the most generally received remedy, viz. extraction, and attempted to ascertain both its value and its evils : and, as far as this disorder may find a cure from the general remedies of Neuralgia, it will save repetition to defer the question till I treat of this subject generally. As to the ordinary local remedies in common use, I have not much to remark ; being willing to admit nearly the whole as occasionally useful, and having little or nothing to say respecting them which is not known to every one. If however it may seem incumbent on me to explain why the local application of stimulants should remove a Neuralgia, or the toothach viewed as such, it can apparently be accounted for on the same principle as in intermittent fevers or ordinary Neuralgiæ, where a powerful stimulus to the nervous system, or any strong counter-impression, so often suspends or removes a paroxysm ; while, in so doing, it will often stop an entire relapse, or, in a recent case, even cure the disease.

If intermittent and toothach both can be cured or suspended even by charms, there is no difficulty in accounting for the casual success of every remedy that has ever been found to succeed in Toothach : while we thus account also for the occasional success of empirical remedies beyond number, and for the reputation which they have hence acquired. I would only remark respecting these local remedies, and of one of the most popular, that as blisters very generally aggravate a Neuralgia when applied near the affected nerve, thus are they frequently equally pernicious in toothach, as many persons have doubtless experienced ; though probably judging them inefficacious rather than mischievous, and attributing the increase of pain to an increase of the disease. And I believe also it will be found, that they are most injurious in the rheumatic toothach, though frequently resorted to by mechanical practitioners ; as the minute vessels are then precisely in that state of action which blistering tends to augment rather than to subdue. And if less injurious, I am inclined to pass the same judgment on the other stimulating applications so commonly adopted ; while when warm water is found useful, it is a fact connected with the remedies of all Neuralgia, which I shall hereafter point out.

I need only further add, that of all the local applications used for toothach, though in reality applicable, properly, only in the case of a carious tooth, or at least seldom succeeding in other cases, the most successful are the essential oils, such as those of cloves and cinnamon, applied to the sensible interior ; which by exciting a violent opposed sensation in the nerve, frequently remove the neuralgic pain. With respect to the treatment as it may be conducted by the rules for neuralgic cases in general, he who becomes master of this subject will easily judge how they may be applied, and under what exceptions : while I may add, that I have, by means of them, cured innumerable cases, thus preventing farther extraction, or saving hundreds of teeth ; and very many, where, after the freest and most destructive use of this mistaken and vexatious remedy, the disease still continued unabated. And if this preservation of teeth destined to extraction has been, in my practice, most extensive in young persons, and above all in young females, this is explained by that greater frequency of this disorder in them, already noticed, and by the fact, that in the youthful, the habit of Neuralgia cannot be so firmly established as in the aged. To detail instances of this nature would be abundantly easy ; but as it would be only to add the indivi-

dual evidences to the general one already deduced from those cases, it would scarcely justify the space which it would occupy.

But before I entirely quit this subject, it will not be irrelevant to add, what I have had frequent reason to suspect, that it was not only part of the neuralgic action on the nerves of the face to render the teeth carious, but that this was a common disease in marshy situations. It would not be a very unreasonable conclusion, whether it were absolutely proved or not: since while it is the effect of that action to diminish the energy of nerves, even to the production of palsy, as is also true of intermittent in general, it is not difficult to understand how the entire death of a part possessing naturally a very feeble portion of life, might be the consequence. As is usual, however, in the whole history of these disorders, the past ignorance and inattention deprive me of a sufficient command over special examples in proof, though I find the broad fact which I have already stated, to be a general remark of many travellers, as I am equally confident of it within my own narrow range of observation. But I cannot help mentioning one very pointed case, observed by Captain Smyth in Sardinia, though I will not pretend to decide on its value. It is, that at Villa Cidro in that island, where the men reside invariably in the mountains, while the fe-



males alone descend to the pernicious plain below, which they are exclusively employed in cultivating, all the latter are noted for bad and spoiled teeth, when the men have no marks of the same kind, but, on the contrary, are noticed for good ones. And if it will give any support to the opinion of the at least frequent dependence of toothach on Malaria, I may remark, what I doubt not others will confirm when they shall carefully review their own experience, that not only does toothach abound most in low and damp situations, but in east winds, or, generally, under all the circumstances which produce intermittents, even as it relates to season, and also to geography: and what is equally remarkable, that seasons or years peculiarly noted for intermittent and remittent, such as have been the immediate years 1826 and 1827, are also peculiarly productive of cases of toothach: just, in fact, as they produce all the Neuralgiæ, and, very remarkably, the Neuralgic Ophthalmia.

## CHAPTER X.

*On the Rheumatism of the Eye: or the Neuralgic Ophthalmia.*

IN conformity to the plan which I have already followed, in making use of such popular names as happen to exist, for the disorders which I have here brought into notice under new views, I have adopted the above term for aspecies of ophthalmia, which, if not so often discriminated from others as it ought to be, is at least known under that name, and under no other. Were I to propose a term corresponding to my own views of the disorder, I should call it, as I have suggested in this title, the Neuralgic Ophthalmia; as I hope to prove that it is a variety or species under the general disease which I have here treated. And as the opinion that it was such, had been formed from my own observation, as long ago as I had first adopted the whole of the views in this essay, or almost ever since I knew what physis was, I have had abundant opportunities of studying it on this theory, and of confirming that belief by an ample experience. If others however should doubt that it is so common a disease; I must reply as formerly, that it has not been sought for; or rather,

that it has been for ever confounded with common ophthalmias, as it is still, daily: and that as soon as it shall be thoroughly distinguished and understood, and whenever practitioners shall begin to discriminate better, they will find that there is no want of cases. And lest this change of name and change of theory should be supposed a frivolous innovation, I must remark that it is of the highest importance as to the cure of a very common disease, maltreated, now, even under the term rheumatism of the eye, and far more so when confounded with common, or as happens also, with contagious ophthalmia: while, under such erroneous treatment, the loss of sight is by no means uncommon; to say nothing of minor inconveniences, and of some even more serious consequences.

In some places, this ophthalmia is arranged by Sauvages with his Migraine or Hemiorania, under the term "*migraine des yeux*," and in others under other titles; proving his want of correct notions respecting it: while Cullen does not take the slightest notice of it in his very meagre and superficial description of the general disorder. The former remarks that it produces inflammation in the globe of the eye, terminating in a confusion of the humours and in suppuration; unaware apparently of the milder cases, yet, in another place, noticing its tendency to re-

turn in the second eye after destroying the first. In St. Yves and Maître Jean, some cases of it are described by the term *amaurosis*; that expression apparently meaning the destruction of the humours: while it is remarked that it endures for months or years, that it is attended by fever, hemicrania or clavus, want of sleep, and giddiness, and that it attacks one eye after the other: while the former oculist, adopting the usual resource which ignorance has resorted to in so many more of these disorders, proposes to prevent this second attack by extirpating the first eye. I did not say too much when I said that had the surgical sect believed the sciatica to be Neuralgia, and dared to extirpate the sciatic nerve, they would equally have had recourse to their panacea, the knife.

Among many casual notices of this peculiar ophthalmia, and unsatisfactory as casual, I must however distinguish the essay of Wardrop; the first, I believe, through which the attention of physicians was fairly called to it. To praise that essay for the accuracy of its description of a much neglected disease, is but to agree with all who have read it: yet I should be negligent of my duty did I not remark, that however perfectly my able friend has seen and discriminated this variety, his account is limited to the severer cases, and that he has not appeared to be aware, in his essay,

whatever may be the case otherwise, either of the slighter and less marked, or even of the chronic, varieties, or of the extreme prevalence of this peculiar species; and that, in consequence, there is almost as much error prevailing, in practice, respecting it, even under the name which he has adopted, by those who have had the advantage of his experience, as there was before. Thus also I perceive no notice of its properly intermittent and alternating characters; while with respect to other portions of the description, such as the general fever, the bilious symptoms, the decided neuralgic and periodical pain, to which I may also add the utility of bark, I should desire no other evidence to prove that it demands the term which I desire to apply to it, and that it is in reality a mode of Neuralgia. I shall however be able to produce much further evidence of its connection both with that disease and with intermittent: and if I were inclined to express any surprise that so acute and experienced an observer had not formed the conclusion to the very verge of which he has approached, I should suppress that by recollecting, that in this as in every other disease which I have here described under this leading character, the foundation and cause of all the error must be sought in the want of a correct and broad view of the fundamental disease itself: Neuralgia.

The descriptions to which I have alluded, with others that I need not point out, confined and imperfect as they always are, do not exempt me from the necessity of giving my own view of the disease: since it is only by describing it in the manner which I conceive to be more correct, that I can hope to establish what I consider its true theory: while I must adopt a mode of description which will convey the proofs together with the facts themselves.

I must however further remark, that while my own views of this disease have been derived solely from my own observations, I have recently found, in reading where I had formerly neglected to read, that some writers have noticed a connection between ophthalmia and intermittent. Among these, I may name Morton, Strack, and Monfalcon; the latter further remarking, that this inflammation is very common in those districts of France where Malaria abounds, and that it is there very apt to terminate in opacities; a fact which I shall also point out hereafter. This last observation confirms, as to this particular affection at least, the opinion here every where stated, that all these local disorders *are* produced by Malaria, whether always so generated or not: but it is important to observe, that while the French writer does not detail the characters of this ophthalmia, nor apparently perceive that it

is a localized intermittent, the German physician, and Morton also, as far as I can discover, notice the disorder solely as accompanying severe and marked intermittents, as an occasional symptom or addition; not seeming to be aware of an ophthalmia of this character with little or no distinguishable fever, nor, either here or any where else, taking any notice of the numerous analogous diseases of which I have treated. If, in the Med. Chir. Trans., I find a record of cases occurring after delivery, where the confinement of the inflammation to one eye seems to point to the same disease, the whole circumstances are not sufficiently detailed to render such a judgment safe: nor will I venture to comment on such other recorded cases as I may suspect to have belonged to this variety, since I hope that my readers are now fully capable of doing that for themselves.

Like all the neuralgic diseases, this one sometimes occurs under a periodical character, while at others it is irregular. And if it is more frequently of an irregular character, or not distinctly paroxysmatic, it is scarcely more so than its nearest analogy, rheumatism of the face; while there are often symptoms also present, which mark accessions and intervals, even though the inflammation itself should be persistent. I shall, without any formal division, describe it now under

these variations ; but must first say a word respecting its apparently exciting cause, lest this should be objected to the supposition that it belongs to this class of disorders. The same remarks will apply to the rheumatism of the face ; and I reserved them to this place, that I might not have to produce them twice over.

It is observed, and perhaps very commonly with truth, that this ophthalmia is produced by exposure to cold winds, very often by partial cold, and very particularly, as it is thought, by a sudden impulse of the east wind on the eye, or face. The popular term in this case is, a "blight;" while as it is not unusual for the east wind to be especially attended by dust, this is often esteemed the exciting cause, and is as often vainly sought after ; the patient being misled by the well-known sensation which follows the enlargement of the small vessels.

Now, so far from this view of the cause being averse to the opinion of its belonging to the class of intermittent and neuralgic disorders, cold so applied is precisely one of the causes which produces these also, just as it excites the rheumatism of the face ; adding a proof, such as it may be thought, respecting the true nature of that disease as well as of the ophthalmia in question. An average of cases will show that the rheumatic ophthalmia is much more common in spring and



during east winds than at any other time, and the very vulgar themselves are indeed convinced of this as to ophthalmia generally: while it will I believe be found, that nine cases of ten, or indeed far more, if not even all of the ophthalmias thus occurring, are this very disease. And I formerly showed, while I have attempted to explain the cause, that such east winds, at that season of the year, do produce intermittents as well as Neuralgia; so that as far as cause is concerned, the whole of these disorders unite under one general head, instead of being separated by differences of cause; while it is still easy to see how the local action of cold on the eye or face, might determine the local disease especially; the wind thus acting by a double power.

But if such a local cause may, in spring, especially determine the action of Malaria to this part, acting on the superficial nerves as it does in the case of a carious tooth or of common Tic, the fact really is, that this ophthalmia occurs through the whole season which produces intermittents and remittents, if less conspicuously in the autumn; and also, as I remarked in the last chapter, that it abounds most in those seasons, or years in which marsh fever rages most. The recent seasons of highly active Malaria in our own country, will establish this fact to any careful observer.

But it is completely proved by the geographical bearings of this ophthalmia, that Malaria is at least its chief cause, as it is that of all the Neuralgiæ; however ignorant we as yet are of the local causes, or otherwise modifying circumstances, which, in this case as in so many other diseases arising from that poison, determine the particular action. Thus, as I have just remarked from Monfalcon, and as I could confirm through many other written and living testimonies, it abounds in all the pestiferous districts of France; while under the general ignorance of Neuralgia in all its forms, it is no objection that French physicians have not drawn the same conclusion; nor, I might add, Italian ones either, nor, in fact, even our own medical persons conversant in climates of this character, wheresoever situated.

As further facts of this nature, I may also remark, that this ophthalmia, or at least an ophthalmia which, in every case where I could procure an accurate report of the symptoms, possesses this character, is endemic on all the coasts of the Mediterranean where fevers abound; occurring also, very remarkably, at the same season, or in the pestilential months of summer and autumn. Thus, to speak more specifically, it prevails along all the marshy or wet coasts of Barbary, during four months; and at Tripoli in particular, to such an extent, that few escape it.

Thus also it is common in Rome, in Naples, where it is falsely attributed to the glare of the sun (a circumstance which may however be an assisting cause) and in Florence, which however praised as a climate, cannot be free from Malaria when the Arno in summer exposes little but putrid mud and marshes, as well as in many other parts of Italy: being also the cause of that frequent blindness, among the lower orders especially, which can scarcely fail to have attracted the attention of travellers. That the Lippi of ancient Rome, so often noticed by the classical writers, were so from the same disorder and from the same cause, is also extremely probable. With respect to Spain, I have the most distinct information from the Captain Morillo, inspector of health at Alicante, that this ophthalmia is very common on the maritime coasts which are subject to fevers, being particularly prevalent in Valencia, and at Albatera and Clivillente, and often followed by blindness. This testimony is unquestionable; because while it is described as attacking the eyes alternately, its nature as well as its causes are there mistaken, just as they are with us; the latter being generally sought, by the people, in the handling of pomegranates. This is just what happens among our own vulgar in attributing fevers to autumnal fruits: the season of the disease in Spain being September and

October, when Malaria is most active : while this particular limitation of time, as well as of place, the peculiar redness and tumefaction of the eyelids, and the incurable (esteemed) nature of the disease, leave no doubt whatever that it is the ophthalmia in question. I have reason to believe too, from some reports, that this peculiar disorder is found also in the unhealthy tracts of Western Africa : but so much confusion has existed among bad observers between this and the contagious ophthalmia, that I cannot disentangle these reports to my own satisfaction. And let me remark by the way, that this latter observation will probably turn out to be of considerable importance ; as I have seen numerous cases of the neuralgic ophthalmia so misnamed in this country, with consequent maltreatment ; and have no doubt that it is a far more common error in the climates especially subject to Malaria and fevers. If Wardrop remarks that it is frequently attended by biliary symptoms, (as occurring, I presume, in autumn chiefly) the solution of this fact becomes as obvious, as the fact itself confirms a view on which I think I need not longer dwell.

To proceed to the description of the rheumatic or neuralgic ophthalmia.

There is a peculiarity in the aspect of the inflammation itself, far easier to recognise than to

describe, and by which alone it is generally distinguishable, even at a distance, and on a mere glance, to those who have acquired that experience which in other cases is called the *tactus eruditus*. I have sought in vain for expressions to say fully what this is ; but I believe it to be as useless as difficult, since, however accurate they might appear to those who already know this inflammation by sight, they would not teach others to know it, inasmuch as no visible object can be justly described to the previously ignorant ; while such a description would be useless to those who are already experienced in this ophthalmia. The more obvious character, however, is a dull, rather than a lively red colour, not unfrequently attended by a tinge of yellow ; the cause of which is especially visible in the sound eye when but one is inflamed, and the source of which must now also be obvious, particularly in autumnal cases. This inflammation occupies the whole conjunctiva, even to the verge of the cornea ; and while the redness is rather produced by the minutest branches of the arteries than the larger ones, the general aspect is almost that of an additional coat of red cloth in the severer cases, sometimes attaining a higher level than that of the cornea.

In severity however, it differs exceedingly, from a mere, general and somewhat pale, redness

of the conjunctiva, to that violent inflammation just noticed. Here, it is apt to resemble the celebrated contagious and purulent ophthalmia; but it can nevertheless be distinguished by attending to its progress and to the collateral symptoms, while it never, as far as I know it, suppurates on the surface, like that disease. This is a part of its history however on which I must yet speak with some hesitation; as, after many years of observation, whence I concluded that it never did suppurate, my opinions have been recently shaken by one or two cases, though I had not the opportunity that was necessary for satisfying myself as to the real nature of the disease in these. Whenever it shall, as a separate disease, have received from physicians the further attention which it requires, this, and some other circumstances which I cannot now well elucidate, will be better understood; while I shall gladly avail myself of such information: though it will be necessary that this disorder shall be truly discriminated for this purpose, lest we return into worse confusion than that which I am attempting to rectify.

Such is the general and obvious character; while I shall reserve some rarer particulars for consideration immediately. But there are one or two remarkable circumstances respecting it, too characteristic to be passed over. It is often un-

attended by any pain in the eye itself; and this seems particularly the fact where it is of long standing and not very severe, though there are cases also in which it is accompanied by as much pain and irritation as the common, or even the contagious ophthalmia. And in such mild chronic cases also, there is, sometimes, not even irritability to light; so that, with the exception of the occasional feeling of dust or sand, it will often last for many months as a mere deformity; the patient, if in low life especially, not applying for advice. It is also a peculiarly obstinate species of ophthalmia; continuing unchanged, even for months, in spite of every ordinary means of cure, particularly resisting local applications, and, as I shall presently show, very commonly aggravated, and in a very marked manner, by the evacuating system.

Wardrop has also remarked that there is, at the commencement, a peculiar sense of dryness in the eye, while that is at length followed by abundant lacrymation. If I cannot say that I have very decidedly noticed the first of these symptoms, it is probably because of a well known usage, in consequence of which physicians rarely see the commencement of a disease, as, with respect to the lower orders, is true of almost every member of the profession: but I can bear abundant testimony to the lacrymation, while its

exceedingly remarkable nature is explained, to me at least, on those principles already stated in speaking of the neuralgic affections of glands.

When there is no pain in the ball of the eye it would seem that the conjunctiva alone is affected; while, when irritability to light attends, we must suppose that the neighbouring vessels, and nerves, within the eye, are in that state, be it from sympathy or extension, which so often occurs in the rheumatism of the face and in common Neuralgia, where, added to the decided inflammation and pain, there is an excitement, a tenderness, or an irritability in the adjoining parts. It is not necessary that the eyelids should be affected, or that the inflammation of the conjunctiva of the eye should extend over that of the eyelid; though this happens in the severer cases, and, as it would seem, rather in the acute than the chronic ones. It is a fortunate circumstance that this inflammation is so much and so often resisted by the transparent cornea, as is the fact also in some other ophthalmias; but abundant instances of this do nevertheless occur. Rigidly speaking, and in the severer cases, the cornea becomes dull; and if this opacity proceeds, it at length forms a cloud or a spot which diffuses itself over the whole eye, while it is more condensed in the centre. Fortunately, even when very considerable, this commonly disappears,



under proper treatment of the general disease, and even within a day or two ; while I have seen it return many times, under different relapses and in successive seasons, without any more permanent effects. In such cases also, it will sometimes be found, by means of a lens, that there is an ulterior disorder of the cornea, resembling very superficial ulceration ; equally disappearing, and without bad consequences, with the general inflammation. Far more rarely does it affect the iris ; but cases even happen, as I shall soon show, where that membrane alone is the seat of the disease ; the neuralgic affection producing here a rheumatism of the iris ; to adopt the common phraseology.

Supposing that the inflammation, thus complete or severe, has not been cured, or, as is the fact, has been neglected or maltreated, the ulterior unfortunate terminations may be as follows. In the acuter cases, the ulceration of the cornea may increase so as to perforate it, in which case the eye collapses, commonly for life ; though this is sometimes healed, with a partial or perhaps entire restoration of the figure at least of the eye-ball. In still worse cases, matter forms within the globe of the eye, and it bursts ; and I much suspect that the cases of single eyes thus lost, which are not uncommon, might all be traced to this particular disease. In what may

be considered acute cases also, if less severe, a pustule, or minute abscess, is sometimes formed in the cornea, inducing, of course, blindness; and further, in these, this portion of the eye will become permanently opaque, while opacities are the frequent terminations of the chronic cases, misunderstood and maltreated. I shall be much mistaken if the very great majority of cases of opacity in one eye, as well as not a few where both are thus affected, have not arisen from this, the most common, assuredly, of all the varieties of ophthalmia, though so little suspected, or rather so nearly unknown: since the essay of Wardrop, correct in the practice which it points out, seems to have produced little effect on the mass of practitioners, while if it had, from not distinguishing the chronic forms, it leaves those persons still in the dark as to the predominant cases of this ophthalmia.

The neuralgic ophthalmia sometimes attacks suddenly, and appears within a few hours, in all the perfection which it is about to preserve; but it is often also preceded by an intermittent or remittent febrile state, sometimes so slight as to be overlooked, not only before the disease, but during its continuance. And, as far as I have observed, some symptoms of this are always present; though it is very seldom that we can ascertain that it has preceded, because the patient

has paid no attention to a disorder so slight. On other occasions, it is the sequel of a previous distinct neuralgic pain, which sometimes lasts even a long time before the inflammation comes on. That neuralgic pain is also, as the precursor of this ophthalmia, most commonly seated in the face, and very generally in the eyebrow or the temple, though sometimes even in the lower jaw; being, in many cases, a common hemicrania, or a periodical headach of some kind, or a clavus; though I have seen cases also, where it has been situated in even more remote parts, such as the arm. Further, this previous disease will occur as a rheumatism, in perhaps any part, or even as general or diffused rheumatism: the ophthalmia following it, perhaps being continued from it, or else appearing as a replacing disease. All these circumstances mark distinctly its connection with intermittent and with Neuralgia in general: and when it replaces another rheumatism or another Neuralgia, this is precisely what occurs so often in the anomalous intermittents as they were formerly described. I shall shortly relate one or two cases which illustrate some of these rarer facts.

But I must remark, before proceeding further, what indeed the reader might now almost have inferred for himself, that the characters of this ophthalmia will be very mainly regulated by the

fact of its being an acute or a chronic disease. In either occurrence, it is analogous to the remittents and intermittents of the same characters, as also to the several anomalous inflammatory varieties of those disorders with which, but for the causes already stated, it should in fact have been ranked. And in either, the proper intermittent fever may be very visible, or may be obscured by the local affection, or may really be obscure, or may be neglected by the physician, or mistaken for the symptomatic fever of inflammation: and in all these particulars also, it resembles the anomalous and simulating marsh fevers formerly described; just as, on the other hand, it resembles the pure Neuralgiæ, in all of them. The distinction between acute and chronic is therefore the primary and important one: while it appears to me that the latter has been especially neglected, and, as far as I can see, not even ranked under the rheumatic Ophthalmia by those who have used this term in describing the acute one: that neglect being also the source of the more numerous evils produced by this disorder. |

Supposing the disease to be established, under any of these modes of attack, the following circumstances will, in a greater or less degree, be found to attend it, by a careful observer: while I need scarcely remark again, that they are perpetually overlooked by the mass of practitioners,

attentive only to an obvious symptom, in the usual manner, and, very generally, utterly ignorant of the existence of such a disease, or at least of its real nature and theory ; or, if now partially informed of it through Wardrop's essay, perhaps refusing to believe on the testimony of others, what they have not observed themselves, because adding prejudice, and sometimes pride, to want of discrimination.

A watchful physician will rarely fail to perceive that physiognomical mark of a cold stage at some period of the day, which I have so often pointed out ; as the fever of this disorder is generally, but not invariably, a quotidian ; while in many cases, that stage, and even a hot fit also, are distinctly marked. This is true even of the slightest varieties and of the most chronic or most habitual and repeated ones : while in the severer, acute, disease, the fever is strongly marked as a remitting, or even as a continuous one ; as continuous at least as in simple remittent : though, under types more distant than quotidian, I have met few of a severe character ; those of a tertian form which have occurred to me having been most commonly mild, or else chronic cases.

Such a febrile state is often, as usual, paroxysmal while the inflammation is permanent ; but this is no cause for surprise, as the same happens in the rheumatism of the face, in that of the in-

tercostal muscles, and in other analogous affections, and also not unfrequently in the purer Neuralgiæ, as in sciatica. Supposing this febrile state to be present or not, or to be more or less distinct, there is frequently a separate neuralgic pain accompanying the inflammation, throughout the disease, or, occasionally, for some days only; being the hemicrania, or the pain in the temple, or in the eyebrow, which I formerly noticed as sometimes preceding the attack; and being sometimes an extremely severe Neuralgia. This is the symptom which forms that criterion for the disease which ought never to be mistaken, though in reality rarely attended to; and it is so marked and so discriminating, that, to pass it without notice, or, when present, to treat the disease as common ophthalmia, is unpardonable in even the most mechanical practitioner. I might add to these several collateral symptoms, all of them proving the neuralgic and intermittent nature of this ophthalmia, those other numerous disturbances of the general health which so often occur in intermittents and Neuralgiæ; but this would be merely to repeat that which can scarcely yet be out of the reader's memory. Where bilious affections accompany it, the explanation already suggested becomes still more obvious, as this view equally explains the utility of Emetics.

In this disorder, it may happen that both eyes

are affected: but as far as my own experience goes, the affection, in the greater number of cases, is in one eye only, or at least, only in one at one time. This, in itself, is a highly discriminating character; and I much question if there is any other of the ophthalmiæ which determinedly affects but one eye, unless by a mere casualty. It is this neuralgic ophthalmia which ought at least always to be expected and inquired for, wherever one eye alone is found to be affected. And if pain should be present, it will generally be found that it is in the neighbourhood of the diseased eye; while it will often be very marked in such a spot, even when that organ itself is free from pain.

A further character, peculiar, or I believe, exclusive, to the neuralgic ophthalmia, is the transference of the inflammation. I call it transference, from its obvious nature, as well as in conformity to the common notion of metastasis in diseases; but I consider it to be, philosophically, a paroxysmatic state of a truly periodical variety of this disorder under a peculiar type. Both the eyes must, in this case, be considered to be under a morbid state of susceptibility, or of dormant disease, if I may use such a phrase, similar to that which exists in the nerve in Neuralgia when not actually producing pain. And the disorder itself finds its analogy in the double tertian, supposing the disease to alternate daily, as it is not

unfrequently found to do: while other parallels are not wanting, should the transference be less regular, or should one eye, long affected, become well while the other inflames; since similar occurrences are common in all the anomalous or local intermittents; as for example, when the rheumatism of an arm is exchanged for palpitation, or a toothach for common intermittent: cases which, together with other analogous ones, I pointed out formerly.

Where this remarkable symptom occurs, the original inflammation, however previously severe, sometimes disappears entirely, even within a few hours, so that its former existence could not even be suspected; while, in a corresponding manner, the new one attains its utmost violence in a time as short, often to disappear again in the same mysterious manner. It is surprising that a fact so extraordinary as this should not have attracted suspicion long ago; since nothing analogous to it occurs in other parts, if we except gout, and some very rare cases indeed of metastatic diseases, of which even some are probably more intimately connected with intermittent than has ever yet been suspected. It is more surprising that where the quotidian or tertian type has attended these changes, the true nature of the disease should



not have been suspected: but perhaps we must be surprised at nothing, when the whole of these disorders have so perseveringly been misapprehended, even when less encumbered and obscured by a local and misleading symptom.

Such is a sufficient description of this disorder in its more general forms; nor, with this, does there seem to me any difficulty in recognizing it wherever it occurs. The mention of one or two other circumstances will complete its history, as far as it seems necessary to detail that.

Like other neuralgiæ and intermittents, it may be limited to one attack, or, having occurred more than once in the same patient, it may put on a tendency to relapse, and thus appear repeatedly. And like all these diseases, it often disappears spontaneously; while the remedies gain a credit that does not belong to them, as the common mode of treatment is very generally either nugatory or mischievous. I must however remark, that the termination of the ophthalmia is not always that of the whole disease as I view it: since a general intermittent, if of a slight or obscure character, frequently remains: a fact equally common in the toothach and the rheumatism of the face, when at all periodical or attended by a marked intermittent; while this, I presume, must chiefly be expected in cases where the intermittent is of a chronic character, or

when the patient has suffered from other forms of that disease.

As to the theory of neuralgic ophthalmia, if it is not very evident, it is at least as intelligible as that of any other form of neuralgic inflammation. Of the true, the ultimate theory, of any inflammation, we know absolutely nothing: since, after all that has been written on this subject, we have but so many words; one term substituted for another. If all that we can know as yet of the cause of neuralgic inflammation is no better, it is at least not worse; while we are in no want of analogies, or the difficulty, such as it is, is countenanced by parallel difficulties.

I formerly showed that the intermittent hemi-crania sometimes affected one eye; so as to produce lachrymation, and also a daily, habitual inflammatory state of the eye. It is but to suppose this augmented and rendered more permanent, and we have the ophthalmia in question; it is but to suppose the intermittent overlooked, as it most generally is in this state, and the ophthalmia will appear the sole disease, as every Neuralgia does to those who are equally inattentive. And that this is possible, is proved by the rheumatic or neuralgic inflammation of the face or jaws. The disease here may be mere pain, it may be pain with temporary or slender inflammation, or it may become permanent inflammation; and more-

over, it may also terminate in an abscess ; a fact, further, which occurs, if rarely, in the eye also. The analogy is perfect, as the cause is the same ; while we can find remoter, though not less instructive analogies, in the local and periodical rheumatisms of various parts, attending intermittent, where there is equally inflammation ; similarly variable in severity and duration, similarly periodical, and similarly transferable, or interchangeable with other disorders of the same generic nature, or with those which attend anomalous intermittent.

I might now proceed to the treatment of a disease which I have probably described at sufficient length ; but it will previously perhaps be useful to describe two or three individual cases of the most remarkable nature, since I observe that such narratives often excite an attention and produce an effect rarely attained through any general description.

In the first case that I shall notice, which was not under my own care, but under that of a medical friend particularly interested in the result, the original disorder or attack was a periodical and daily rheumatism in the neck, remarkably well defined. After this had lasted a week, there occurred suddenly a pain in the eye, with inflammation of a very violent character. I entertain no doubt that the intermittent form remained,

either in the febrile symptoms or in the pain about the eye; the violence and acuteness of this being a very discriminating mark, as it does not happen in any other ophthalmia. But as this physician had never considered the rheumatism in question as a disorder belonging to intermittent or Neuralgia, he had paid no attention to the symptoms, and was therefore unable to describe the case more minutely. Far less had he ever considered any ophthalmia to be a disease of this nature; and the patient was therefore treated in the usual manner, with the unfortunate termination in blindness, from the formation of a pustule in the cornea. I have given this case as I received it from the physician himself, so that others may judge; while the suddenness and violence of the attack of inflammation, the accompanying severe pain, and the previous periodical rheumatism, leave no doubt in my own mind respecting the nature of the disease.

If the formation of pustules or opacities has been thought rare in the rheumatic ophthalmia, by those who have known this disease and distinguished it by this term, it is a question on which I must add a few words; having been unwilling to enter into an argumentative discussion of this point in the general description, on account of the difficulty which I have experienced in convincing those with whom I have argued

this subject, that opacities could be the produce of this variety of inflammation. If this opinion shall be confirmed, it will evince more strongly than ever, the necessity there is for reforming the history of ophthalmia, and for establishing that theory of this variety which I believe to be the true one. It is a most important question as relates to the practice: since, at present, the want of success, or rather the consequent evils, are generally the direct produce of maltreatment, or at least, they are very often produced by this, if often also by mere neglect or ignorance of that which is the right method.

It is common, as I remarked already, to find persons who have suffered the opacity of one cornea; and though it is often difficult or impossible to obtain the history of past cases, I have found reason to believe, in the few where I have been able to get information, that the original inflammation had often been of this nature. It is much more easy and safe to form the same conclusion in another class of cases by no means uncommon; nor have I ever been fairly put into possession of one of these, where I have not been able to decide that the opacities in question had been the produce of this very variety of ophthalmia; while the other conclusion was no less obvious, viz. that a mistaken view and a wrong practice had most probably been the causes of

the evil. The cases to which I here allude, are those where we find, that, through many years, sometimes through a long portion of life, an inflammation, more frequently of one eye than both, will return at different periods, often without apparent causes; while, from some one of these, there has been produced an opacity more or less extensive, to which other and successive ones form additions; the termination, in severe cases, being at length in absolute blindness. If, at the commencement of my investigations into this disease, I was both unwilling to believe this, and afraid of adopting the practice which I have suggested, a further experience has rendered my mind at ease on this subject: nor, always supposing that a right decision has been made as to the nature of the inflammation, can I doubt of the correctness of the practice, when I have found that yield, and the incipient opacity also, whether the first or an additional one, disappear in a few days under it, and when, in the same patient, every previous attack had lasted for weeks or months, while, in some instances, each severe relapse had extended the opaque spot.

Passing over the question of mere opacity, it might be said, on theoretical views, that suppuration should not happen in such cases; but while we know so little of any inflammation, we cannot say that neuralgic inflammation, and in a

membrane, ought not to produce abscess, inasmuch as rheumatism does not ; while this is a doubt which I examined formerly : and as this does actually occur in the membranous and equally neuralgic inflammation of the gums, as I then showed, there is a perfect analogy to justify the possibility of its occurrence in the eye. Further than that, I shall lay no stress on this part of the preceding case ; leaving it to future observation, whenever this disease shall be admitted and understood as universally as it ought to be.

In proof that this disorder is not so admitted and understood, let me now say that the physician in question was not one of the ordinary mass of routine practitioners, but the most learned and the most attentive of all my personal acquaintances, a man to be admired and esteemed most by those who knew his talents best. I note this, because it argues strongly for the necessity of a new investigation of this disease, when the want of a previous mark on it could so mislead such a man, and in a case also, where he had the deepest possible interest. And that he was so misled, generally, will be further proved by the next case I shall relate, which I have however selected on account of its very definite and remarkable character ; since even in this, marked as it was, and which I attended with him, I

could not convince him of the existence of such a disease as I have been describing, or that this was an illustrative case of it.

In this instance, and where the personal interest was as great, the patient was suddenly attacked in the evening with an inflammation of one eye, which ceased by the following morning. On the next evening, there was no inflammation; but it returned on the alternate one, and in the other eye, terminating similarly on the following morning. As I chanced to reside in the house, I could perceive and point out the tertian cold stage; this being evidently a tertian intermittent, or rather, that disorder doubled, (not double tertian) inasmuch as the succeeding fits were different. Nothing was done; as it was wished to watch the natural progress of the disorder, which, after lasting thus about ten days, or displaying six different alternations of this nature, became a decided double tertian; the inflammation returning every evening in the alternate eyes, to terminate in the morning. And in this instance, the neuralgic intermittent pain occurred in each eyebrow alternately, accompanying the inflammation; so as to produce a case as strongly marked as is easily conceived. I shall only add that it was afterwards cured by bark; but that I did not even then succeed in producing a free assent to opinions which, probably, I might even



now have kept to myself, for all the impression they are likely to make for these twenty years to come; when those who have been most active in opposition, will be among the first to recollect that all this was long ago their own opinions.

In the last case which I shall notice, the patient had been for some time afflicted with a general or diffused periodical rheumatism, which at length was followed by inflammation of both eyes, the original disease continuing. I did not see this case till long after its commencement, and when the cure was perhaps hopeless; at which time both the pupils were so contracted, that a pin could with difficulty have passed through one, the other being absolutely closed. By the patient's account, he had been seized with occasional fits of blindness during the progress of the disease, arising doubtless from the contraction of the pupil, while I have as little doubt that the Iris was affected by the neuralgic inflammation. I could not obtain a more minute account of the case, as he was a man in low life, and had no medical attendant; but enough remained to prove that the judgment I had formed was correct. For, at this time, though one eye seemed hopelessly obstructed, the other was occasionally of use; while the patient observed, and without inquiry, or leading question, that whenever the general fits of rheumatism in the

limbs came on, the eye became blind, from the closing of the pupil, recovering again when those ceased. I need only add, that as the disease had at this time lasted many years, the fits were no longer as regular as they had originally been, as happens in all chronic intermittent disorders; and as the contraction of the pupil accompanied them then accurately, it is probable this had done so from the commencement, though the exact particulars had been forgotten. I must presume that the disorder which I have thus described, as far as relates to the contraction of the pupil, would find a sort of place under the *myosiæ* and *metosiæ* of systematic writers; and while I have sometimes reason to suspect the same cause in some of the recorded cases, I find little satisfaction in reading the confused descriptions of the symptoms, and feel little confidence in deciding on their identity, however I may suspect that the greater number of them belong to the disease in question.

Let those who have more opportunities than myself of seeing this disorder of the Iris, examine such cases on this view, and we shall then know how far this theory applies to them; since, as I have just observed, we can judge little or nothing from former recorded cases, inasmuch as they have been reported without the necessary attention to the marking symptoms. But if it is

agreed that the inflammation of the iris is of a "rheumatic" character, it is probable that the present view is the correct one, and that all the cases belong to the neuralgic and periodical diseases under review. And that, at least, it is frequently so, I can confirm from many cases, in which this disease of the iris has either preceded, or followed, or run parallel with the common neuralgic inflammation of the conjunctiva already described, and in which the true nature of that was amply proved by the accompanying symptoms. One, very particularly marked, ought perhaps to be mentioned, because, in this, while the first symptom of all was simple Neuralgia of the face, with a marked intermittent paroxysm, it was succeeded, first, by the contraction of the pupil in the nearest eye, after some time followed by general inflammation of the conjunctiva, and lastly by an universal periodical rheumatism: all of these being connected by one general disease, and all illustrated by the various facts as to anomalous intermittent and Neuralgia already described.

I have yet two suggestions to offer, which I was unwilling to introduce into that more pure history of this disease which I have deduced from unexceptionable and sufficiently numerous cases. I have had reason to suspect, though it is scarcely more than suspicion, that the neuralgic

inflammation was capable of reaching or attacking the crystalline lens, as well as the iris, or the other humours, and thus of producing cataract. If indeed Sauvages makes this remark on his "*migraine des yeux*," it is of no value, since the term he applies to the cataract thus insinuated, does not appear to mean an opacity of the lens. Unfortunately for my decision in this case, the practice in all the disorders of the eye has been, in London at least, so entirely taken out of the hands of physicians, as also far too much from those of surgeons in general practice, that I have no opportunities of confirming what the examination of two or three cases had led me to suspect; a fact which, simple as it may appear, tends to illustrate the evils which arise to physic as a science, from the separation to which I have here alluded. In the present state of doubt therefore, I must leave this suggestion to the inquiries of the oculists; though with little hope of light, except from the very few, who, fortunately for medical science, have contrived to retain a share of this department, as surgeons and physicians engaged in general practice also, in their own hands.

And while to promote the Science has here been my sole object, for the sake of those who, whether as physicians or patients, may profit by

the Art, I may be allowed to remark that this is but one case out of hundreds, in which a public, at once ignorant and over-wise, suffers for its own folly: for ever guided by fashion, or considering physic as a mechanical art, best administered, as chairs and tables are made, under division: while from the usual illiberality of feeling which, in a commercial country, can see no motive of action but gain, the physician or surgeon who argues against the system is accused of being himself swayed by motives of self-interest. So little is it considered, that even in this country, but far more in the other parts of Europe, there are thousands who pursue science as well as literature for the sake of science and literature alone, even to the sacrifice of private interest; as there are many more by whom gain is felt as a necessity, not a primary motive, and in whom that necessity is still made secondary to the cultivation of knowledge. Thus also, in this very case, does the multitude which passes this censure, forget that splendid effort of generosity on the part of the medical profession, the introduction of vaccination, and the perseverance with which it pursued this object even against public opinion: an instance of the sacrifice of private advantages to the good of mankind, of which no other profession has ever, or in any age, furnished an exam-

plé: and a fact which, in particular, presents also the most absolute contrast to what has ever been the conduct of one of these, The Law.

To return. The other suggestion relates to Amaurosis; and it rests similarly on some partial observations, in the first instance, but is better supported, both by analogy and an examination of recorded histories. The general analogy of all the Neuralgiæ tends to show, in the first place, that such is not an improbable event as the consequence of this disease, whether flowing immediately from improper treatment, or from their general tendency towards palsy. And if it is easy to understand how a paralysis of the retina might follow in any case where, in this ophthalmia, the neighbouring nerves had been affected, it is particularly obvious how it might be the termination of the simple Neuralgia of the optic nerve formerly described.

Again, to derive another analogy from intermittent fever, since the value of those has often been here demonstrated, I formerly noticed from authors, two cases of Amaurosis connected with that disorder; suggesting then a possibility respecting its cause, which I must nevertheless, in some measure repeat here. They are, in any view, valuable as to the history of this hitherto almost incurable, and much neglected disease: and though to be ranked with the primary palsies

arising from Malaria or intermittent, they will at least confirm the possibility of its also arising more indirectly, from the cause which I am here contemplating ; since this is, again, one of those involved cases of local and general action which are so difficult to separate, and which never cross me without causing me to regret that I have been here obliged to separate them.

I may here add that Plater also describes a case of amaurosis produced by intermittent ; nor, whatever illustration it may afford, whether it should be irrelevant or not, can I avoid here pointing out a very remarkable cause of that disorder, which can scarcely be absolutely unanalogical. This is the amaurosis once so common among the nightmen of Paris, but which has now, I believe, disappeared under better regulations : the blindness being almost instantaneously produced by the impression of the poisonous gas in question. Be its value what it may in this argument, it at least illustrates the operation of Malaria in the production of palsy.

And while I remind the reader of this leading analogy, let me also remark, that while the attack of amaurosis is sometimes sudden, the affection is, in this, not less singular, that there is often no disorder in the head or the intellectual faculties ; nothing indicating disease of the brain, but the whole derangement appearing to be one

of the retina or the nerve alone. And when I have seen the amaurosis of one eye produced in a day, apparently indeed within an hour or two, during exposure to a cold or moist wind, in a young and healthy man, that exposure also having been in marshy ground, in shooting snipes, and without any other apparent derangement of health, I can as easily understand why the Neuralgia should attack the optic nerve in this form as it does in that of pain, from the same cause, or how, if we prefer the other view, the disease should have been a partial or localized intermittent thus produced.

Such are the chief arguments and illustrations as to the possibility of the dependence of amaurosis on the neuralgic inflammation of the eye or on the Neuralgia of the neighbouring parts in any form, since it would be superfluous to make a separate division for this disorder, and it really is unnecessary to separate the cases. And I am further confirmed in this opinion by the remarks of some authors, and especially of Schenkius, on an amaurosis produced, as he says, by spasms of the moving muscles of the eye, acting so as to compress the optic nerve. Thus at least would I analyse a case in which his solution certainly deserves little praise by an anatomist. The accompanying and previous symptom of note, was a violent headache, and I doubt not, a Neuralgia:



and if I conjecture that the same explanation applies to some cases of amaurosis from violent pains in the head, related by Morgagni, Vieussens, and others, I am weary of attempting to extract from confused narratives of disorders falsely viewed and interpreted, such apparent truth as those who are equally ignorant or misled will be delighted to reject whenever that is possible.

Let me yet however add, and while this sheet is in the press, that since these remarks were written, I have met with two marked cases of amaurosis of one eye, produced very pointedly, and within a few weeks, by a Neuralgia occupying the external part of the orbit: the gradual paralysis of the nerve, and the total absence of all other affection of the head, or of the corresponding eye, offering evidence as clear as could be desired, of the real source of the disease, and of the truth of the above conjectures.

And if, throughout this essay, I have often been obliged to produce conjectural testimony, from the inattention of physicians to the subjects and views of which it treats, I may here introduce a fact which appears to me to bear on this question, and on the original one, viz. the power in this respect, of the inflammatory diseases; but of the value of which I shall suffer others to judge. This fact is, that in the Mediterranean,

and in the same districts where that ophthalmia which I suppose to be the disorder under review is common, *nyctalopia*, as it is there improperly called, or in reality, the loss of vision after sunset, is a very common affection: while I need not remark that this is, in fact, a modified amaurosis, or a partially, or moderately paralytic affection of the retina or nerve. To trace any individual cases of this nature to the previous ophthalmia, would complete a piece of evidence which must as yet remain imperfect. I need scarcely now suggest, in concluding these remarks, that should this view of amaurosis prove well founded, even but for a proportion of cases of that wretched disorder, it will lead to valuable revolutions in the present practice, as well in regard to the remedies for good as for evil; while to insist upon that point now, would be utterly superfluous.

I ought now to proceed to the treatment of this disease, which, it might be anticipated, would be, on the present views, that of Neuralgia in general. But, as in the case of toothach, it is absolutely necessary to examine the former practice, not merely because it throws light on the very nature of the disorder, inasmuch as the system followed produces exactly the same evil effects which it does in all intermittents and Neuralgias, but because of those very evils themselves, which are often extremely serious, both as

positively injurious proceedings, and as diverting the attention from the real remedies. These again, in examining I must criticize; nor, without that, could I possibly treat of the cure of this disorder. The *lædentia* as well as the *juvantia*, to use medical phraseology, always demand attention from the physician; and if the *lædentia* here are the produce of physis itself, it cannot be my fault if physis suffers from the examination, and physicians also, as far as they administer what is hurtful. Both here and in treating of the toothach, I would more gladly have avoided such criticism, than in any other case that has preceded; because as both diseases have by degrees almost fallen entirely into the hands of separate classes of practitioners, not physicians, and further, too often, not even surgeons, in the proper, practical sense of that word, such remarks will appear the more offensive, involving, as they must appear to do, distinct and small classes of men, than if they had affected the entire multitude of practitioners in all classes. But this I could not avoid with justice to the subject, and must even submit to the chance of being wilfully misapprehended, and the accusation of having written with a sort of general personality which has not once entered my thoughts.

Yet I cannot concede that physis has gained by that somewhat modern fashion which has

separated the profession of the oculist from those of the physician and surgeon; making the diseases of the eye a trade rather than a branch of the general science, and reducing it, very nearly, like that of the dentist, to a mechanical art. That physic, altogether, as a science, and even, in many points, as the art of healing, has been injured, or at least retarded, by that greater separation which has been established in it, will scarcely be doubted by any philosopher; however expedient, or rather, convenient, that separation may, practically, be to practitioners themselves. In the study of that chaos, English law, from unavoidable circumstances connected with its overwhelming multiplicity, superfluity, and confusion, the effect of this separation is such, that a lawyer, in the proper sense of the term, scarcely exists; while if we look through the general mass, this art and study, science it cannot surely be called, is so divided, that while each has his department, he scarcely knows what is the pursuit or knowledge of his neighbour; so nearly does this also approach to a mechanical empiricism, just as it is almost a pure trade.

Thus must we deprecate that ulterior subdivision of practitioners in physic, to which there is at least a strong tendency, when we daily hear how much one man is expert in one disease, and another in something else; since the event would

be to reduce every thing to a pure empiricism. Nor can I doubt, among other points, that while this separation has had a most injurious effect as to the science, in every division of disease where it has yet occurred, it has been perhaps particularly injurious in the case of Mania; though I know very well on what grounds this opinion will be disputed, while I could not provide an answer for these arguments without infringing on a subject which is not now before me.

And as far as the practice in physic is already thus separated, it is actually such an empirical art or in imminent danger of becoming so, in every hand by which it is thus partially exercised. If the oculist had no other duty than to operate, we could admit that he would be a better, because a more practised mechanic than the general surgeon from whom he has separated; though even this may be questioned, where there is really nothing so especially difficult in his most delicate operations. But it is not easy to comprehend how any practice, and theory, of physic, can be duly considered by him who has cut off that one branch from the whole body of the science; while it is most certain, in fact, that it never is so understood. In the particular case under review, I have shown that ophthalmia is often, not an independent, or a local disease, or a disorder of itself, but a variety in a series of the

most obscure constitutional diseases which exist ; requiring great delicacy of discrimination, as well as universality of medical knowledge and of experience : of which it is an ample proof, that it has, like all its congeners, so long been a subject of misapprehension. Were it even otherwise, the constant habit of contemplating one single subject, and that subject as a trade and a branch of mechanism, abstracted from all its connections, cramps the judgment and obscures the talent for observation, even where these exist or have existed, and even in persons of a real education ; while it is easy to conjecture what the consequences must be, where such a department is occupied as a mere art, by those who have not laid the solid foundation of science by means of universal physic and surgery. But I need not extend remarks which, nevertheless, I could not avoid, connected as they are with the knowledge of diseases treated chiefly by oculists ; persons also, in whom it will chiefly lie, should the present separation continue fashionable, to administer the cure, after having convinced themselves, if indeed that shall ever happen, that they have been wrong. But it would be highly unjust to blame this department of practice solely, for the past mistakes, since those pervade all practitioners, as I have shown ; though it is to be expected that they who are conversant with all these diseases,

as physicians, will more easily adopt just views than those who have no such opportunities, and who are long likely to pursue the routine which has been habitual to them.

To proceed to the examination of the usual, and as I consider it erroneous and pernicious practice. As long as this particular inflammation was confounded, and as long as it shall continue to be confounded with common ophthalmia, or with true, simple, inflammation, (if by these terms I may distinguish what all understand and no one can explain) the practice has been, and will be, that which is applicable to such inflammations in general, namely, evacuation, and principally blood-letting, both general and local, together with purgatives, and further, blisters; a routine practice, in short, which all can conduct without examination or reflection. I need scarcely add to this, what is equally familiar, astringents and stimulants of various kinds, in the form of topical applications; applications that have been multiplied in the shape of lotions, solutions, or ointments, by those, that large mass, who expect to find in variety and multiplicity of substances and medicines, what never yet was found, and who forget that the useful, the only real knowledge, is knowledge of diseases, not of Pharmacopeias. That professed oculists in particular should especially abound in such expe-

dients, was to be expected ; since, to the want of general principles, principles which teach how to classify and rescind remedies, instead of multiplying them as if each metal or each stimulant possessed some specific virtue of its own, is naturally added a kind of necessity, as well as a desire, to appear more refined and more mysterious than physicians and surgeons in general.

The fundamental error then, here, lies in not distinguishing the particular rheumatic or neuralgic inflammation from others, in looking solely at the local disease, and even, at that, carelessly ; and in not perceiving the constitutional affection which belongs to every Neuralgia, and which, with varying local tendencies, produces all the disorders enumerated in this *éssay*.

Yet I do not say that the rheumatic inflammation of the eye has always been thus overlooked, having indeed already pointed out a marked exception : since, although it has been mistaken for common ophthalmia, perhaps in ninety-nine cases of a hundred, and is still daily so mistaken, there have been practitioners, among whom I have already named the most discerning, who have seen that it was a different disorder, though still not perceiving its true affinities ; and who have consequently attempted to vary the treatment, and successfully. Yet for want of a correct theory, that treatment has not been esta-



blished on those general principles which would have given it an authority sufficient to produce the requisite effects, by generating an efficacious conviction; while it is chiefly also perhaps for want of this correct theory, that the chronic or milder cases, which form the vast majority and produce the greatest arithmetical quantity of evil, are still confounded with common ophthalmia, and consequently, maltreated. And if even the utility of bark has been shown, that substance has been adopted by those who have followed what was taught, rather empirically, than from any such views of the disease as I have here attempted to establish. I might, myself, think this remark unjust, as others perhaps may, were it not confirmed by this fact; that even where this remedy has been resorted to, the general principle of aiding its effects by the obvious collateral means, of diet, or whatever else, has not been adopted; while, further, it has been used only at the end of a treatment where all the preceding remedies have been commonly pernicious, inasmuch as proceeding as a view of active and local inflammation, too often to be reduced by evacuations, in spite of the warnings on that head. Thus also has there been adopted a remedy, which, while it evinces an incorrect view of this disease, must be condemned, equally for its apparent severity as its inutility, except in

peculiar cases ; and therefore, if safe in the discriminating hands by which it was introduced, not to be trifled with by those who adopt, without distinction or discrimination, whatever is recommended and has become an usage. I mean the puncturing of the eye to discharge the vitreous humour ; while I trust that I shall not, in thus censuring the general use of this remedy, be supposed to censure the able surgeon to whom we must trace the recent recommendation.

I have already said, on various occasions, that in all intermittent and neuralgic diseases, the evacuating and debilitating system is pernicious, and that among the remedies of this class, the most injurious is blood-letting, both general and local : a subject however which I must yet re-examine in inquiring respecting the general cure of Neuralgia at large. I did formerly show however, that in remittent and intermittent fever, cases did occur or might be imagined, where not only a moderate use of such means, particularly at the commencement of the disease, might be innocent, but was even occasionally beneficial, and for reasons which were then stated.

Thus it is in this ophthalmia, when violent, and particularly on the first attack ; since the effect may often be to reduce the local disease which threatens local injury ; while, though that remedy be really pernicious as it regards the con-

stitutional affection, inasmuch as it commonly renders that more obstinate, the evil from this cause would be as nothing compared to the possibly impending local evil. It is plain therefore that I do not absolutely exclude blood-letting, both general and local, in this ophthalmia, at least when recent and severe; yet I think it highly essential that the reasons for permitting its use should be duly understood, as I trust they will now be by reverting to what was formerly said on this subject; since, thus to understand the theory of their application, is the only security that exists against their abuse or misapplication. The disease must not be considered as a common inflammation of a local nature, reducible, from its commencement to its termination, by the usual local and general remedies of these generic affections, but as a peculiar disorder connected with, and dependent on, a constitutional disease in which the evacuating system is pernicious, but in which that is permitted rather than ordered, under peculiar and accidental circumstances in the local affection, and as a purely local and temporizing remedy.

Hence it is plain that the use of this remedy calls for nice discernment on the part of the practitioner, though it is impossible to give more minute directions. As in every thing else in physic, that which is necessary, and which in

reality is the only useful, is to master the general principles ; not only to understand clearly the general theory, but to study to apply it to each case ; for, throughout this science and art, every case is a special case under some one general head; each example requiring its own treatment, yet every treatment bottomed on a leading principle ; while he alone is the physician who can thus see each case as an individual fact in philosophy, diverging from a more leading one ; since he alone will know how to apply his remedies, in all cases and under all circumstances. To that rare being, the philosophical practitioner, I have already said enough, and more than is necessary ; but I must proceed.

Supposing this ophthalmia to have become established, or else chronic, the employment of evacuants becomes, not only useless but pernicious ; and the pernicious consequences are often most serious. They are generally also pernicious when repeated after the urgent and first necessity, should that have existed, is past ; as their tendency is to confirm and aggravate what they cannot cure. In practice, in reality, it will rarely happen that any evacuants are useful, or necessary ; as a very large proportion of the cases of neuralgic ophthalmia are so slight, however apparently severe to those who view them as

common inflammation, that no local injurious consequences can be apprehended. And further, it generally happens that applications for relief are not made till the disorder has been so long established that the originally active state which might have justified blood-letting is past: so that if the empirical rule were universal for empirical practitioners, namely, to exclude the use of these remedies from every case whatever, the average results would produce a very small proportion of evil.

The simplest bad effect of these remedies is, a negative one; or it is, that they do not cure the disease, and that it becomes inveterate or chronic, for want of the remedies that would remove it; possessing that tendency in common with all the neuralgic diseases. It is a worse event, when this inflammation seizes on the cornea or the iris; since while those remedies fail, or aggravate the disorder, the consequences may become those which have already been described; blindness, under two modes, or at least serious injury to the sight. And what I have said of blood-letting, applies, similarly, to systems of purging, particularly with the neutral salts; while this does not exclude a rational use of those remedies, and perhaps, above all, of calomel; a remedy, of which the necessity will be particu-

larly seen in the autumnal cases attended with biliary derangements, already noticed. On this however I need not dwell further.

But if, under the system of blood-letting, local or general, or of evacuation under whatever mode, the neuralgic ophthalmia often lasts for many months, or even for years, sometimes continuing thus without interruption, it more generally subsides to recur again, as happens in all these disorders when established or chronic. And further, it will often happen, as every practitioner might see did he but look for it, that there is a positive aggravation of the disease produced, and sometimes very pointedly, by each successive application or remedy of this nature: a fact which might be supposed to open the eyes of the practitioners, if we did not know the power of habit in preventing observation, and how impossible it is that observation can exist without reasoning. But that the disease is also at times cured under this treatment, while it appears falsely, to be cured by it, I am not about to deny; while I trust I have already amply shown that such cures, and in spite of pernicious treatment, occur in all the Neuralgiæ. These are the spontaneous cessations of that disease which form so remarkable a part of its character, as they do of intermittent in the chronic state; depending sometimes on constitutional changes of which we

are ignorant, and at others, probably, brought about by those unobserved circumstances which so often terminate Neuralgia and intermittent; such as change of place and habits, mental affections, the occurrence of other diseases, and so forth.

And lastly, I should here remark, that such spontaneous cures of the neuralgic ophthalmia, all of them misleading the practitioner so as to make him persist in a wrong system of practice, often occur from a change in the place or action of the constitutional disease of the Neuralgia. Thus have I seen this inflammation cease in a single day, on the occurrence of a relapse of common intermittent, and that also repeatedly; as it is similarly replaced by common rheumatism in a limb, by that of the intercostal muscles, by toothach, by intermittent headaches, or by simple Neuralgia of the face; while the practitioner, unaware of this connection, imagines that he has cured the one disease by his remedies, and that the patient has fallen under an entirely new one.

I believe, that there are some local evils arising from the use of leeches in ophthalmia, which are more frequent in this variety than any other, such as erysipelatous inflammation and abscesses in the loose skin of the eyelids; but as they are of no great moment, I need not dwell on them. As to scarification of the vessels of the eye, it is an

useless practice, since it produces no effect in the disease; while it does not probably lead to any direct injury, and might even, in the same cases where blood-letting is allowable, be useful. With respect to blisters, they might, *a priori* be judged pernicious, inasmuch as they aggravate all the neuralgiæ and neuralgic inflammations, when placed on or near the diseased part. Such they in fact prove; and if less hurtful at a distance, no great benefit can be expected from them towards removing what, in reality, is a disease of the whole system.

But if I have now finished the examination of these injurious remedies, or *lædentia*, among which I must also include low diet and abstinence from wine, on the principles so often explained, I must observe that their pernicious effects are not limited to the eye alone, or to the mere local disorder. There are wider ones produced on the constitution, and these remain to be examined. They however are such as this mistaken system produces in all Neuralgiæ, of whatever character: and they are of such a nature, so exactly those which take place in all the disorders of this class, and in the intermittents also, under that pernicious treatment, that they tend strongly to confirm that view of the character of this ophthalmia which I have here given. But as the more proper place for detailing them



will be when I consider the cure of Neuralgia in general, I must defer their consideration, and refer the reader to that place ; though I will here give a sketch of a single case illustrating the evil progress of this ophthalmia under that treatment. And if I thus detail it, it is not because it is a marvellous or an uncommon one, but partly because it unites in itself all the proceedings and consequences which I must otherwise have illustrated by detailing three or four instances of a parallel nature, and partly because, from my peculiar situation with respect to the patient, I had the opportunity of watching, almost daily and for a twelvemonth, the progress of the disease and the effects of the remedies, while, very naturally, and in a certain sense, properly, not permitted to interfere in that which was under the charge of a regular oculist ; since it is no novelty, that as soon as a single branch of physic becomes thus separated, those who used formerly to be intrusted with its care, are supposed on a sudden to lose all their previous knowledge. I need only add, that I could easily quote other cases, illustrating and confirming the present one, where all the effects in question were produced, though not all to the same extent, nor all in the same patient.

The person in question, an artisan under the patronage and care of an opulent family delighting

in physic, was seized with the common neuralgia of the face, occasionally in its more ordinary form, and at other times under that of toothach. I was permitted to cure this by means of arsenic; but after a short time it returned in the temple, and was then followed by a tolerably severe ophthalmia, affecting the conjunctiva of the neighbouring eye, and also attacking the iris. Nothing could be better marked than the disorder; as it was attended with a distinct intermittent and quotidian cold stage, and as the neuralgia of the temple was equally regular; while the contraction of the iris was also as periodical, occurring once a day, and lasting a determinate number of hours.

I attempted of course to explain my views of the character of the disease, while I proposed the method of cure; and with exactly the same success which I have generally had, as well with patients as with my brethren of the profession, for these twenty years and much more; at the manner of which I can now but smile, while I regret the price at which the unfortunate patients have so often purchased this imaginary triumph.

The patient was therefore sent to an oculist, at that time of high reputation; it having been concluded, as it is still, that neither physician nor surgeon could possibly understand a disease of the eye like the man of experience; such are the ideas attached by the vulgar to a word, which, if

their meaning was the true definition of that term, would make the oldest nurse, or the empiric who sees a hundred patients in a day, the best physician ; just as he who has manufactured the most tons of Glauber salt and calomel in his life-time, is the most philosophical chemist.

If, out of humanity to the unfortunate patient, I attempted to explain the case to the oculist, the suggestion was received just as I expected ; and, from that time, I could but watch, for instruction, the progress of the case. The first effect of local blood-letting, blistering, and topical applications, was a great increase of the inflammation ; and as the same means were continued and repeated, the disorder became daily more severe ; while, the Neuralgia also increasing in severity and extent, and the intermittent becoming much more strongly marked, it was declared that there was a flow of blood to the head ; and so forth. General blood-letting from a vein, together with that from the temporal artery, was therefore adopted and repeated ; while after a certain progress in this practice, aided by more topical remedies, more purging, and more low diet, the patient became so ill that he could no longer attend the oculist, and was therefore sent to an hospital. These operations occupied about two months ; and if I was, after this, cut off from as frequent a sight of the patient as for-

merly, I was easily able to ascertain, before this imprisonment, that he was labouring under an inveterate quotidian intermittent, with a Neuralgia that scarcely left any repose, extreme debility with various nervous affections, and a partial fatuity; all of them the effects which I had gradually foretold to his patrons, as any one may foretel them under such practice; while the inflammation was such as apparently to extend to the bottom of the eye, from the excessive and constant pain, and while total blindness on that side had also resulted from the complete closing of the iris.

In the hospital, all this, in the usual way, justified more bleeding and more of every thing which had already proved so injurious; while the disease persevered without a single feature of alteration, except for the worse, during nearly three months, when the gradually increasing fatuity became a mania, and the patient attempted to destroy himself by cutting his throat. The attempt was however unsuccessful; and after the wound was healed, he was sent home, to be transferred to a lunatic asylum, during which interval, I was enabled, for a week or more, to see him daily. He was then in a state of melancholy fatuity, rather than of proper mania; while the inflammation continued, but in a comparatively mild state, with occasional headach, of apparently

great severity and still periodical, though the state of the intellect prevented any very accurate examination, What was done in the lunatic hospital, I could never discover ; but in about two months he died, and, as I understood through his wife, with the eye still in the same condition.

If this is the report of a case of unusual severity, it is still a highly instructive one ; since every symptom, as well as the general progress, was that which occurs, in a greater or less degree, not only in this ophthalmia, but in every anomalous intermittent and Neuralgia, wherever the evacuant practice has been pursued : while the symptoms are severe and numerous, in proportion to the activity, generally, with which the remedies have been applied ; if also possibly depending in some measure on the patient's constitution, and on the quantity or severity of the general neuralgic tendency or affection. Increase of severity and increased persistence of the local disease, form the one general feature which takes place in all the Neuralgiæ from the pernicious practice in question ; as, in this case, it was increased severity, extent, and obstinacy in the ophthalmia ; while the increase of the neuralgic pain, the general constitutional derangement, the nervous symptoms, and the fatuity which followed, are consequences already pointed out in chronic intermittents with anomalous symptoms,

as well as in Neuralgiæ in general, under the same treatment. If the mania is more rare, it is evidently but a further progress of the fatuity, or an aggravated effect of that state of the nervous system which produces this ; while other examples of mania from maltreated Neuralgia, or from that disorder generally, as well as from intermittent, are not wanting, as I have elsewhere shown. And if this case is a very perfect one, or almost a caricatura, as it may be called, while it is minutely true, it will perhaps seldom happen in practice, that a patient is so situated as to be subjected to so persistent and overcharged a maltreatment.

Further, which is not the least important remark to make on it, there cannot easily or often be a medical spectator to watch the progress of such a case as a mere witness ; while, if the treatment is as little suspected to be the cause of these evils as the disorder itself is misunderstood, it is very plain that hundreds of such cases may occur, or may be occurring every day, in some degree or other, totally unsuspected ; that nature, or disease, will be accused of what is the physician's own work, as happens throughout all medicine, and still more, that as no ophthalmia is suspected of such connections or consequences, the accusation will fall on diseases of the brain ; on disorganization of some kind, or on the ex-

tension of inflammation through the optic nerve, as has in fact been said, or lastly perhaps, on an original and independent tendency to Mania.

This remark is not trivial: it is, on the contrary, a most important one, while it applies to every evil event or bad termination in the whole of these affiliated diseases, whether ranking under Neuralgia or Intermittent, and while a long inspection of practice has proved to me that such events, so misapprehended as to their cause, are numerous and common. It applies indeed to much more in physic; since it must do so to every case, of which the nature is not understood, and where the bad result, while it is the consequence of ignorance, acting negatively or positively, can never be so considered, because of that very ignorance; which, as it originally caused the wrong, must for ever prevent such wrong from being discerned, and also from being rectified in future. Prescience is knowledge: among mortals there can be no other ground of it; or, in action, knowledge is prescience: and it is only he, in those cases, who could foresee the whole train of events, who ever can know, retrospectively, what has been wrong; while it is evident, that not to be capable of discerning this, is an assurance for the continuation of such error; as it equally follows, that in the hands of him who possesses this prescience, such events can never

occur. Thus it is that he who produces wrong, justifies himself on the plea of fatality or necessity, and persists, through all the conduct of life, as in physic ; while such evil can never occur to him who, in foreseeing, prevents ; and to him therefore it will always be supposed that such evil consequences were not allotted in the order of things. If right conduct is thus, in the ordinary affairs of life, called good fortune, as, reversely, wrong conduct through ignorance is considered evil fortune, so it happens in physic, that no approbation attends him who has seen and prevented, since the conduct which did prevent is unknown and unseen ; as the event that would otherwise have followed is equally unforeseen, and from the same ignorance : while excuse at least is ready for him who, suffering evil to happen, or causing it, has, under the same ignorance, been thought merely unfortunate. And thus also does it happen that the greater fame follows him under whom a disease has been most severe ; as this ignorance knows not that he has been the cause of the severity, and equally treats with contempt the physician of a slight case, not knowing that it was his discernment that rendered it such. Under such inverseness of conclusion must the sound physician however submit to discharge his conscience ; while it must be hoped that he will feel that his sufficient reward,



since it is the only one that he is likely to inherit.

It is plain now, to return, on merely moral considerations, that if this instance, as an entire case, is solitary, it could not possibly be otherwise, unless a similar witness had watched such another, since assuredly he could not suffer it under his own management; and further, that it will and must be solitary, till the present views of this disease begin to be established, since, let it occur ever so often, it will never be suspected to have been thus caused; while, further still, whenever such views shall become universal, it can occur no more, as no practitioner would suffer a disorder, the cure of which he understood, to proceed to such extremity, and could scarcely thus watch it in the hands of another, without an interference which would then be easy, as it is, assuredly, far otherwise at present.

Such are the explanations which I have thought it necessary to give respecting a case which might be supposed useless, as being either solitary or accidental, or else ill explained; and I shall be much surprised if, when those who really can review their own experience (a talent not the lot of all) shall review it, they do not find facts to illustrate what I have said, and to confirm, even perhaps by cases absolutely parallel, that which I have here narrated.

I can indeed conceive that the production of Mania in this case will, by those who are yet ignorant of the real nature of Neuralgia, be attributed to hereditary disease or to other causes ; or at least that those who are yet unconvinced respecting the real nature of the ophthalmia, will deny, that it could have been the effect of the evacuations. But while it is not the only case of mania which I have seen thus produced in Neuralgia, though fatuity is the more common result, and while the probability is confirmed by what I have said respecting mania from these causes in another place, Sauvages has described a case where the evacuation of the aqueous humour (the process recommended by Wardrop,) was followed by mania. Not that I conceive this operation to have been the cause, since, on the contrary, from his erroneous views respecting the disease, there can be no doubt that it had been treated, altogether, like my own case, by the usual system against active inflammation.

But it will not be useless to notice another case, though of a very different character ; because it is of that kind which is most common, and which, in fact, is perpetually occurring in practice. And I have the same opportunity of describing it ; that which cannot very often happen to any one ; namely, that I knew the patient intimately through the whole period, but was not

consulted, very properly, as not engaged in the practice of physic or surgery. In the family to which this individual belonged, all the members, with one exception, suffered an intermittent, from a temporary residence in a pestiferous part of England, which eventually proved incurable, destroying also two of the patients; this person alone having the disease in an almost undiscernible form, but being affected with the characteristic inflammation of one eye: a further instance, were one necessary, how one malaria will produce different diseases in different persons, as it is a proof that it will produce this particular disorder. The oculist, of course, was referred to, in spite of such explanations and remonstrances as were practicable, and the usual practice was followed and persisted in. The consequence, as might be expected, was a general loss of health, which was not restored till some years after this operator had been dismissed: at the same time, the sight was destroyed, through an increase of inflammation that seemed to occupy the whole organ, finally reducing it to half its size; and at this moment, after nineteen years, it continues inflamed, though occasionally becoming pale, or entirely losing its redness. Such, but in very different degrees, is a very common result of the original maltreatment of this inflammation: and of this character, we may be almost sure, is every

instance where habitual ophthalmia occurs in any individual.

Respecting the cure of this ophthalmia, I have left little to say, after thus examining the wrong and common system of treatment; while though the general cure of Neuralgia is reserved for a separate place, I cannot well avoid pointing out what is further requisite in this disorder, as I was compelled to do in the instance of toothach.

How far, general, and even topical bleeding, is admissible, rather than valuable or useful, I need not now repeat. It will not cure the disease, under any form, is always pernicious if persisted in, in the acute cases, and invariably so in the chronic ones. With respect to emetics, purgatives, and sudorifics, their utility and value are to be understood from what has been said of them in treating of the marsh fevers; for the constitutional disease is the same, and the same must the treatment be. And thus also we can see in what manner undue purging must be mischievous; in acute cases as well as in chronic ones; and how, especially in the latter, it may bring on relapses; as these also will be produced, just as they are in chronic intermittents, by any debilitating causes.

Of the topical applications I must observe, that there are, even acute cases of this disorder, sufficiently teasing to the patient, and even alarming to timid ones, where the mere local

use of stimulants does alone remove the disorder ; the constitutional affection in such instances being perhaps trifling, or even, it may be supposed, nothing ; or else disappearing spontaneously, or from slender changes of circumstances, as intermittents themselves, equally slight, so often do. In such cases, I know not that any thing is more efficacious than hot water, as hot as it can be endured ; while in the chronic relapsing attacks it is often sufficient alone to the cure. In all these cases, acute as well as chronic, persistence is most necessary : but in saying this, I must also remark on a mistaken and injurious practice, not very rare, namely, that of applying ice ; while I ought to say, generally, that cold washes of all kinds are either useless or mischievous. In the chronic cases also, especially, very strong metallic solutions, such for example as sulphate of zinc in the proportion of ten grains to the ounce of water, often remove the inflammation ; while this particular class of remedies also dissipates the opacities of the cornea, unless caused by pustule or ulceration, or unless very dense, from repeated attacks. No incurable opacity from mere inflammation in this disease, ought in fact to exist : and when it is not prevented or cured, there has been neglect somewhere. Of other applications, opium, both within and without the eye, is often also useful :

but let me remark here, that its chief, or almost sole value, is when applied on the subsiding of the paroxysm, or during that remission which can always, with care, be discovered : diminishing thus, as in all the neuralgic affections of tender parts, that soreness, or pain, or uneasiness, which persists after the proper paroxysmatic attack has passed away. Thus is also the internal use of opium useful in the same circumstances. As far as this substance is of use as an application in the chronic cases, it must, I think, be classed with the stimulant remedies already mentioned.

Lastly, in all the modes of this disease, that is, in the chronic ones at all times, and in the acute, whenever the febrile state permits, or when such evacuation as may be judged necessary has been premised, the remedies are those of intermittents and neuralgia ; namely, Bark, and the tonics, under all those regulations which I need not again discuss ; though I ought to remark, that in numerous cases of the long continued and relapsing disease, and in many indeed of the acuter or more severe ones, and even when of some standing, I have found both arsenic and bark eminently successful without any other aids, while rarely failing to cure a new case within even a few days. As usual in all other cases of Neuralgia under every variety, the inflammation has been more tantalizing, and the remedies less actively

efficacious, as it has been of longer standing and more subjected to a previous course of maltreatment; though I can scarcely, with any effort, recall a case to mind, of whatever character, which was not cured, when the patient's confidence corresponded to my own. These, in reality, are the true remedies of this ophthalmia: a fact which if it had been always known, would have saved thousands from blindness as from suffering; and not only so, but from broken constitutions or even worse evils; since the long persistence of this disorder produces the same effects as the similar duration of any intermittent or any Neuralgia. And in the inveterately chronic cases, if these fail, we have little resource but in that change of air and habits which, as to intermittent, has already been examined. I need not add the use of a good diet and of wine: having even cured some cases by those means alone, where the disorder appeared to have been protracted by the opposite system. But I must regret, in terminating this brief sketch of the treatment, that I have never had any opportunity of attempting to suspend or stop the disorder by that stimulant treatment which so often cures the ordinary intermittent: partly from the difficulty of obtaining a case at the commencement, and partly from the prejudices of patients. That it does deserve a trial, I must however think; and shall be glad

to find that others have attempted it, and, as I cannot help anticipating, with success.

For a minuter examination of these remedies, I must refer to the general discussion on the treatment of Neuralgia hereafter ; but I cannot terminate this chapter without a criticism far different from those which I have so often been compelled to make : as grateful as those have been painful. If I have not adopted Mr. Wardrop's recommendation of evacuating the aqueous humour, it is because I hope that the necessity for this will never again occur ; but it is pleasing to observe how a man of acuteness and talent will discover a right system of cure from his own unassisted observations, and even under the difficulty of contending with an imperfect or a wrong theory. I need not point out how nearly my own mode of treatment corresponds with his, while each has been formed independently, and on different grounds ; nor what confidence is due to this treatment, when the one had arrived at it through a theory, and the other through the road of mere experience, without one.

And I should not do justice to the value of theoretical or scientific proceedings in physic, did I not also point out this as an instance of the utility to be derived from generalization, when the analogies are justly drawn and the induction legitimate ; since, whatever doubts may continue to be entertained respecting the truth of the



views contained in this essay, as to toothach or aught else, that truth is, in this case, proved by this important and unexpected coincidence, and by the success of the practice. I may well, therefore esteem the Essay on Rheumatic Ophthalmia to which I allude; since, independently of its intrinsic utility, it is, to me, especially of importance; while I even hope that the description of this peculiar affection, as here given and thus supported, may go far towards gaining credit for the whole theory of Neuralgia.

I indeed trust that the value of applying to physic the usual philosophical processes which have so eminently succeeded in the other sciences, has long ere this been apparent; since, if any useful truths have been established, it is entirely owing to that most simple and obvious mode of proceeding, as I was in possession of no facts that were not common to all physicians from all times. It is a machinery which all can equally command if they please; and which, if it has not been used as largely in the science before us as it ought, has apparently been neglected from a sort of tacit concession, or belief, that physic was not yet in a state, as to facts, thus to profit; from forgetting that what has been often, and justly, called the New Philosophy, was applicable, here, as to all the sciences; and from proceeding on a basis derived from the infancy of physic exclusively, not from the maturity of science at large.

## CHAPTER XI.

*General Remarks on the Connection between Neuralgia and Intermittent.*

I HAVE now completed the account of all the diseases which I had proposed to rank under the general heads of Intermittent and Neuralgia, as far as my own observation has furnished me with evidence to this purpose. The list is a long one, and has probably proved a very unexpected one to my readers; and yet I am far from believing that I have exhausted the subject, or that further observation will not discover that there are other disorders which may with equal justice take rank under this general head. But this I must leave to future observers; having determined not to overstep the evidence, since I know of no philosophy that is not founded on facts. I will not even venture to suggest what I think possible, or likely, from general induction re-directed to particulars: as, esteeming Theory with every one who understands the real meaning of that term, I consider that it has no greater enemy than hypothesis; eternally as those two most opposed terms are confounded by the vulgar of all ranks.

As to the proofs by which I would establish a

community, in the first place, and a generic one, between Intermittent and Neuralgia, and in the next, among the subsidiary local diseases under Neuralgia, they have been so necessarily given during the preceding descriptions, or have so arisen out of the very accounts of symptoms and treatment, that, to go over them all, again, would be to produce either a meagre abstract or a tiresome repetition. Yet, perhaps, this hazard must be incurred to a certain extent, for the sake of those who may not have carried the arguments along in their own minds; while I have also a few facts to add on this subject, which could not, hitherto, easily have found their place any where, without producing digressions, or, interrupting the order which I thought it necessary to adopt in conformity to the existing opinions and prejudices. These I shall state first; selecting however but a few of the most conspicuous from a considerable number, as examples of the whole.

If I have shown that all the diseases treated of in this essay do arise from Malaria, while at the same time I have not excluded the simple action of cold as a cause, while I have shown that local injuries will produce Neuralgiæ, and while also I do not deny that there may be yet other causes, unknown to us, it will be a strong proof of a community in the nature of these disorders, to find that the same decided and ascertained cause,

Malaria, applied, in the same place or places, to many different persons, produces the whole of them. It would be tedious to enumerate all the cases of this nature which have occurred to me, as it would require a considerable number to embrace all the disorders here described; but I will quote one as an example of my meaning on this subject, chiefly because it is a very extensive one, and that my means of ascertaining the facts were perfect.

In this case, the situation was so decidedly subject to Malaria, that scarcely an individual, out of many different families which had resided in it, had escaped intermittent at some period of their stay. In one season, and in one family consisting of twelve or fourteen persons, the following were the effects in as many individuals. One tertian; one double quotidian headach; another tertian; one diseased spleen; in one individual, aged only eighteen, a temporary hemiplegia with obscure quotidian; a second case of palsy in one leg in a person of twenty, with obscure quotidian and symptoms of diseased spleen; a regular Neuralgia of the face, of double tertian type. In a following, distant, season, and in some of the same persons, there occurred; palsy of the face with imperfect speech, an attack lasting beyond a week, and replaced by quotidian neuralgia (Tic); a double tertian, common intermit-

tent, terminating in a quotidian, or double tertian, neuralgia; a quotidian with neuralgia in the shin bone; the same patient having had, in a preceding season, a common tertian so obscurely marked, that he was ordered to Italy for a consumption, (a consumption which was cured by two ounces of bark and a change of place to ten miles' distance,) and, in a following one, having been attacked again with a double tertian, of which one fit was attended by the neuralgia of the shin and the other by a headach.

This particular instance, it will be seen, embraces a considerable number of varieties under the two heads of Intermittent and Neuralgia; while I might even have extended it, by adding what occurred in other seasons, in the same place; among which I might have enumerated an irregular intermittent with neuralgic palpitation of the heart; an acute hepatitis (probably dependent on the same cause); two instances of diseased spleen; one of Neuralgia, with obscure intermittent, in the foot; one of periodical toothach with double quotidian; one of periodical quotidian rheumatism in the arm: one of quotidian with irritability of the bladder: a second, of very severe neuralgia of the heart, replaced and cured by a common quotidian; and one of a periodical general chronic rheumatism, of a most defined type and quotidian character.

This is an example, altogether, of the species of evidence to which I here allude; nor can there be a rational doubt that the same cause, acting on different persons, produced all these disorders, particularly as, in some of the individuals, a different season produced a different one from what a preceding had done. I cannot, it is true, adduce another case so extensively inclusive; though I have little doubt that analogous or similar ones will be found by those who shall seek for them. And if, by going through my experience, I could find analogous examples, cases where common intermittent and one or more of its anomalous varieties, as well as of Neuralgia, had occurred in different individuals, —simultaneously, in one house or situation, so as gradually to embrace every disease that I have here treated of, the enumeration would be tedious, while it could scarcely add to the conviction of those who agree with me, and would assuredly make no impression on those who refuse the evidence which I have already produced.

On this class of evidence I must however make the following remark. If I think that it can easily be verified in the unhealthy districts of England, now that the facts and the theory are pointed out, and if I also think that it will be so confirmed, it is even more probable that this will be effected, with even greater ease and in a

greater mass, in the pestiferous districts of France and Italy. It is true, as I formerly observed, that the physicians in those countries have overlooked Neuralgia altogether, even in its best marked and simplest form; as they have not produced one general conclusion such as I have here drawn, respecting any disease which was not pure and perfect fever, though casually noticing some of those. But it seems to me so impossible that the class of facts which I have just brought in evidence should not exist in those countries, that I shall scarcely hesitate in saying, that while I rely on their being so confirmed, if ever these opinions should reach so far, I am content to rest the whole question on that issue.

To this general species of evidence respecting the community of all these disorders, as far as that can be proved by community of cause, I may next add, that which consists in the fact of all or a great number of these diseases, from common remittent and intermittent through all their anomalies, down to Neuralgia in all its modes and forms, appearing in one individual; alternately replacing each other, or succeeding irregularly, or else variously combined. I formerly noticed this fact; but it is sufficiently important to be again pointed out under this head of general evidence.

Here, as in the former case, I could, and without difficulty, produce instances enough to prove, from different individuals, the mutual connection and community of every disease that I have described; by showing that, in some one person, two, or three, or four, or five, or even more forms, have been united, or have succeeded to each other in such a manner that the new disease formed the cure of the preceding, or the substitute for it. But this would be, again, to produce a tedious list of cases; while, as before, I could not expect to gain converts among those who will not be convinced by a single case, and while I consider such accumulation of evidence superfluous to those who will feel the value of one, selected from the whole, as the former has been, on account of its extensively inclusive nature. And I may add, as to the case which I have selected, that my habits of intimacy with the individual during a long course of years, enabled me to verify the fact in the most satisfactory manner. It is the history indeed, as to this point, of nearly thirty years; since thus long was this person the victim of the diseases of chronic intermittent, or of this disease in its simple form as well as its anomalous and more purely localized ones.

In mere fever, this patient experienced various remittents, together with tertian, double tertian,



quotidian, and double quotidian, in different years ; and, in the anomalous varieties, what may perhaps be referred to the Asthmatica, and to the Stranguriosa, and also what may possibly be the Nephralgica of Sauvages ; together with the Emetica, the Hysterica, and the Soporosa, of the same arrangement. These intermittents also, at different times, were united with, or succeeded to, or were replaced by, periodical and marked general chronic rheumatism, periodical local rheumatism in a limb, and rheumatism of the face, with repeated slight attacks of the ophthalmia of one eye, attended by hemicrania. In simple Neuralgia, this patient also experienced that of the face, repeatedly, long relapses of pure hemicrania, clavus, that of the eye, or optic nerve, sciatica, and a similar affection in one radial nerve and in the anterior crural ; as, on different occasions, he suffered quotidian intermittent toothach, and the most severe neuralgia of the heart which I have ever witnessed, recurring annually for many years, replacing, once, a local periodical rheumatism, and more than once replaced and cured by a quotidian simple intermittent.

This is probably a rare case of severity and multiplicity, as the case itself was remarkable for its inveterate duration ; but I doubt not that it can be paralleled, if not equalled, by the expe-

rience of others. But it is plain that it can be so paralleled, only by taking the same views of these diseases as myself; since, under the present opinions, most of those would have been considered as independent disorders, accidentally meeting in a single subject. There will, also, always be a difficulty in studying such extreme and durable cases; as no one patient would probably so long persevere with a physician, since he would naturally attribute incapacity to him, finding no cure: and it is this, (very natural surely,) versatility of patients, which will always form a check to the study of cases of this nature. But as far as relates to this one, or to such minor instances of the same kind as I have declined recording, that I may not prolong this branch of evidence, there seems as perfect a demonstration as physic can ever be expected to produce, that all the diseases enumerated arose from one leading cause, or were, all, the distinct demonstrations of a general disorder, or habit, rooted in the constitution.

To these two general branches of evidence, consisting in community of cause, and in coexistence and interchangeableness, I may now add a third, founded on the effects, whether for good or evil, for cure or aggravation, produced by remedies or modes of treatment as to all these disorders, Throughout the whole catalogue, it is

to the same class or system of remedies that we must look for the cure ; while it is further remarkable that these are all remedies acting on the constitution. Whether it be a general disease or a local one, let it be even as purely local as possible, and let it be mere pain, or else inflammation, and in whatever part of the body, we derive no advantages, or very slender and partial ones, from local remedies ; while we must cure the disease, if we do cure it, by those general ones which are equally the remedies of an intermittent occupying the whole body and without any local tendency or symptom. And if remedies that are not medicines, such as change of air and habits, such as mental impressions, such as are even charms, act in removing simple intermittent, thus do they act similarly in removing the local diseases in question, even down to a common toothach. If we had no other proofs that all these disorders, that even a disease so apparently simple and purely local as a toothach, were truly constitutional, this would be proof enough ; as, in no other mode than as affecting a constitutional derangement, could a few doses of bark remove a disorder of this nature.

Certainly, that many diseases are cured by one remedy, is not, by itself, a proof that all those diseases are of the same nature ; but in the present case, and combined with the former evi-

dences, the fact in question adds a strong confirmation to the present views ; which are also further confirmed by observing, that the same system of treatment which is injurious in any one of these diseases, is injurious in all the rest. And this is true, whether they be local or general : or, the treatment which is pernicious in simple intermittent, is pernicious in all the anomalous and local diseases alike, and in the Neuralgiæ as in all else ; while, very remarkably, where those improper remedies are the remedies of inflammation in general, they are injurious in the particular inflammations that appertain to this set of diseases.

It is still more remarkable, that the evil effects produced by such wrong treatment are the same, or similar, whatever may be the particular form, or disease, out of this entire catalogue, for which it is administered. Whether it be an intermittent of the most ordinary character, whether it be an anomalous one, or should it be any of all the neuralgic diseases, however apparently local and simple, it is the constitution, or the system at large, which suffers from that improper treatment, and in the same manner ; while as far as the local, or even the general disease may suffer, it is, in all, also, in the same manner ; namely, that they become confirmed or aggravated, or acquire a tendency to recur when they would otherwise have

terminated. No greater proof could easily be offered that these diseases were essentially constitutional, in all their forms, and dependent on a radical, concealed, general cause, or morbid condition: or, at any rate, this fact confirms strongly all the other proofs already offered in support of that view.

What these effects of improper treatment are, and what the treatment itself to which I here allude, is, have been pointed out in various places. But to complete this part of the general evidence, I may repeat generally, that the injurious treatment consists in the debilitating system, or in low diet and evacuants, among which blood-letting holds the place supereminently mischievous. And be the disease what it may, be it general, local, or even inflammatory, the effect of such treatment is to produce or aggravate general debility, to induce a variety of nervous symptoms, which I need not enumerate particularly, and, in proportion as it is perseveringly or violently pursued, to bring on paralytic affections, fatuity, even mania, with irreparable bad health, and unquestionably, if in extreme excess, death.

If, with all this in addition to what has preceded on the same subject throughout the whole of this essay, I conceive that I have made out my case, by evidence even to superfluity, I must still perform my promise by a brief extract from the whole. And this is perhaps necessary; because

I must not forget that an individual without name and without authority, unknown as a medical teacher or writer, not even engaged in practice, places himself in a difficult and hazardous situation, when he doubts or condemns what has been, and is believed and practised by the thousands, his predecessors and contemporaries, of name and reputation to which he has no pretensions. But, at every hazard, he who conceives himself right, is bound to declare what he thinks to be supported by evidence; particularly where so deep and wide an interest as that which concerns the health or suffering of mankind at large is at stake. It is a case where silence would be deeply criminal; while, if he is right, all will gain, whereas, if wrong, he will be the only sufferer. And should he prove, in the end, to be right, all that will follow as to the past, is, what has been, through every thing, the history of the world; that the force of habit and example, while it forms the whole philosophy and the sole rule of vulgar minds, is such as to influence even the most powerful ones, and that, from whatever cause, persons are not often found who will discard all that they have been taught, to form new opinions; still less, who will venture to declare their opposition to opinions and practices long received.

Yet in all that appertains to human life, not

merely of science, such a lot must be that of some one. There must be an individual, in every thing, who will doubt or disbelieve what he has been taught, and what others believe; who will form conclusions and opinions for himself out of the facts around him, and by his own reasoning; discarding that of his predecessors and contemporaries. Were it not so, had every man believed what he had been taught, the world would now be what it was in its childhood: but as he who ventures on a new path must oppose all, it is his necessary fate to be too often opposed by all, and to find but hostility when he hoped for support.

The abstract in question is therefore the following, passing over the community of remittent and intermittent fevers, as an admitted fact. Intermittent fevers arise from Malaria, certainly, as principally, and from mere cold possibly; but are renewable by mere cold, when once they have existed.

They are often attended by peculiar local symptoms producing the anomalous varieties, while, when the febrile state is slight or obscure, these local disorders appear to be the chief disease.

Such local disorders are either affections of the nervous system, or of an inflammatory character, and they have been fully described.

The same intermittent fevers, more or less distinct, are accompanied by all the Neuralgiæ that have been described, whether these consist of simple pain, or are attended by inflammation; and when the febrile state is slight or obscure, those local affections appear to form the chief disease.

If intermittent fevers alternate with all the anomalous local symptoms or diseases, so do they with all the neuralgic diseases: and in such cases, the supervention of one is the removal of the other.

Thus also, all those local diseases, including all the Neuralgiæ, alternate with each other; or the appearance of one form is the cure of a preceding one.

Many of the Neuralgiæ will exist almost simultaneously, or else in alternating paroxysms; these having any of the types of intermittent.

They also exist in alternating paroxysms with simple intermittent: or a particular doubled type will consist alternately of a paroxysm of pure fever and a paroxysm of Neuralgia.

The same individual, under a persevering intermittent, will experience many of the anomalous forms of that disease, and also many of the neuralgic diseases, in alternation or succession, or else in union; and, in such cases, the type, and



the hour of recurrence, will be the same for all the forms, even through a long course of years.

Malaria will produce the neuralgic diseases directly, as, probably, will mere cold ; but they are renewable by mere cold when once they have existed ; and in these cases, though the intermittent fever is probably always present, it may be so slight as to be overlooked. In this, the first cause, Neuralgia, in all its forms, resembles intermittent : but it differs, inasmuch as it can be excited by direct injury of a nerve ; a difference however which is of no moment as to the general identity, because we know of no means of thus injuring the entire nervous system so as to produce general intermittent.

The same Malaria, in the same spot, acting on different individuals at the same time, will produce either intermittent or Neuralgia, and every form of each.

Intermittent and Neuralgia, in all their forms, are cured by the same remedies, and injured by the same wrong treatment ; and those remedies are constitutional ones, whether the diseases be local or general ; while, very particularly, the local and the general diseases both, are cured by operations on the imagination.

The conspicuously wrong treatment for all of these diseases, whether Neuralgiæ or intermit-

tents, consists in the debilitating practice, as the right treatment is found in what is esteemed the reverse; and whatever be the disease, be it local or general, when that practice is pushed so far as to become injurious, the injury is always of the same character, affecting the entire nervous system.

Such is a summary view of the evidence; and I must now proceed to some circumstances belonging to these diseases, which may, in one sense, be looked on as consequences, in another, as modes, of them.

## CHAPTER XII.

### *On certain Consequences of Intermittent or Marsh Fever and Neuralgia.*

IF I have placed here, as consequences, some symptoms or diseases which belong to the subjects treated in this essay, it is not, as I just insinuated, that I am quite satisfied with viewing them in this manner. Yet they could not well have found a place as mere modes of Neuralgia, since they are generally the sequels of a previous painful state. But when I have been unable to venture any where on the order that I should have approved, I must be content to suffer this additional irregularity, in the hopes that, at some future time, I may be allowed to adopt a more consistent view of the whole subject. What I have to say however, is little more than a repetition of some circumstances already noticed in the former description; though it was not the less necessary to allot them a distinct place.

I formerly showed that intermittent fever sometimes attacked, directly and primarily, in the form of apoplexy, and further, in that of palsy, affecting different parts, and being more or less

extensive. Further, in the progress of such a disease, there occur paralytic attacks, either sudden or gradual; being, in the latter case, generally incomplete. Hence therefore the palsy may be considered both as a sequel and a mode; being the consequence, in one case, of the gradual action of the fever in a local direction, and, in the other, being a local disease or symptom, attached to the general one, analogous to what happens in other cases with anomalous and special symptoms.

Now both these events also happen in simple Neuralgia; though as far as I have seen, it is rare for the paralytic symptoms to precede the painful ones. But when this does happen, the primary attack is a numbness, or a more complete palsy, in the nerve which is about to undergo the pain; and this follows after some time, either relieving the palsy, or being accompanied by a certain degree of it. Hence, I presume, we must consider the palsy as a mode of the neuralgic disease; a partial affection, analogous to the apoplexy or greater palsy which commences the attack of common intermittent. And if as I formerly suggested, amaurosis should or does occur from cold or Malaria, yet without a marked intermittent fever, this would be an example of that nature, of a perfect and simple kind.

But in the case of Neuralgia, it is far more common for the palsy to be a sequel of the painful state ; and if it is rare in cases of short duration, it is by no means uncommon in those of long standing. In such instances, it is commonly gradual, commencing with a numbness ; though occasionally also it is sudden ; while in both cases, the pain generally ceases, perhaps to return no more ; sometimes, however, alternating, or occurring occasionally. Further, such palsies are generally confined rigidly to the parts which receive their nerves from the affected trunk or branch beneath the diseased or pained point ; a circumstance sufficiently familiar in sciatica ; though it also happens, especially under wrong treatment, that it extends so as, from a palsy in the cheek, to become one, perhaps in the whole arm, or even an entire hemiplegia. Lastly, should a palsy of this nature be extensive or durable, and particularly should it have been extended or produced by blood-letting and the remainder of this treatment, it is very commonly attended with diminution of the intellectual powers, or with modified fatuity, or even, as I shall immediately indicate more fully, with absolute loss of intellect.

But if fatuity follows palsy in these cases, so is it produced, simply, or without previous paralytic consequences, in all the Neuralgiæ ; whether from the action of the general disease itself

on the system, or from that aggravation of debility in the brain, or general nervous system, which is the effect of improper treatment. The cases of this nature are, in fact, precisely similar to those which occur in intermittent, as might now indeed have been anticipated; adding proof upon proof respecting the radical and essential similarity between these two classes of disease, and strengthening every analogy in every light in which these can be examined. Such cases surely must have occurred to practitioners familiar with Neuralgia; though not improbably so far mistaken or overlooked, as to have been attributed to some other and accidental cause; while I need not again urge, as I suggested formerly respecting the effects of blood-letting, that while they would naturally escape notice among the common people, there must always be numerous instances also among the better ranks, in practice, where the physician's want of intimacy with the patient's intellectual character and pursuits, still more the general inattention and the not very overpowering discernment of the great mass of ordinary practitioners, would prevent them from discovering the fact; while where there was but a small portion of this faculty previously present, the diminution of that little would be scarcely an appreciable accident; so very little intellect is sufficient to carry the majority of

mankind through their ordinary duties in the world.

Nor is it difficult to comprehend, at least in a broad view, why fatuity should be a consequence in these disorders, of whatever nature: since there cannot fail to be an analogy between the loss or diminution of the nervous power as that is employed in maintaining the communication between the mind as a metaphysical *Ens* and the instruments of sense and motion, and that diminution as it relates to the action of the mind respecting those impressions, or respecting its application of them. And the very fact itself is amply proved by the fatuity, in various degrees, which does actually accompany palsies; on the whole of which question I shall have occasion to make further remarks hereafter.

And before I quit this branch of the subject, let me introduce a fact or two relating to the general affection of the nervous system in Neuralgia, which did not occur to me where it might perhaps have found a more appropriate place: it is too important to be omitted. It is, the effect which this disorder has in destroying the energy of the mind and extinguishing the courage even of those habitually brave and reckless. This is a confession which I have received from many persons, but from no one so strikingly as a Spanish officer of high rank, who had been engaged in

the most perilous situations during the long war in that country, and who acknowledged that he had immediately become an absolute coward, while fully aware of the cause, from an attack of the Neuralgia of the face. The disease in this case also lasted long, while this ardent spirit had become almost a woman, shedding tears on every, the slightest, occasion. The same effect in reality follows all the intermittent diseases when become chronic: while if the political consequences are often curious and important subjects of speculation as they relate to nations, I must reserve them for some proposed additions to the essay on Malaria, should an opportunity occur. How these chronic fevers may affect individuals, there are thousands who can acknowledge; if there are not many who are as yet aware of the cause which has so changed their characters, and who are therefore anxious to conceal from others, and desirous too to shut out from their own reflections, what they feel to be true, and fear to be a purely moral fault.

And further, they who will attend to the diseases which are the subject of this essay, not in the usual manner, but in the spirit of philosophical generalization, will also often be able to perceive, in the general derangements of the constitution, or in that anomalous ill health where the term



debility serves as an excuse and an escape for the general ignorance or the indolence of the practitioner as to its nature, abundant proofs of what ought to be considered an universal paralysis of the nervous system. I use the term paralysis rather than debility, because the analogy lies here: it is that loss of energy in all the nerves, possibly sometimes in the brain alone, which, in a higher degree, and more limited, produces absolute palsy; and which in so general an affection as I choose to select for illustration, would probably, in its extreme, be death. Nor is this general case, to which I here allude, uncommon, if it is sometimes slight, and from that cause therefore, among others, overlooked. It continues often, even for weeks or months, after an acute attack of remittent or intermittent, or perhaps follows even a durable condition of the chronic variety, being frequently also attended by obscure symptoms of this fever itself. In such cases there is ordinary muscular debility, while every muscle of the body, even to the fingers, including also the diaphragm itself, is affected. From this last cause it is that the respiration becomes so peculiarly affected as we often find it in these cases: while in addition to all this, the heart and the arteries act feebly and slowly, there is no appetite, the bowels become peculiarly torpid, and the

senses of taste, smell, hearing, sight, and even of touch, are most perceptibly impaired ; the insensibility of the eye being peculiarly remarked by those who have naturally perfect eyes and acute sight, and who were in the previous habit of making accurate use of them. If the mental faculties are then also frequently impaired, it is but a consequence that would be expected : and from a few cases (not however sufficient) which I have seen, I am inclined to believe that when this latter effect occurs as the striking symptom, the others would be frequently found if sought for.

And if I have thus shown that paralytic affections, local or general, as also idiotism or debility of intellect, are, both, brought on by intermittent diseases, whether fever or Neuralgia, and that it is the effect of evacuations to aggravate or determine both, the action, as I shall hereafter suggest more distinctly, being exerted on different portions of the nervous system, and if also cold, apparently pure cold, can induce palsy, so does it operate on the intellectual faculties, producing the analogous effects, debility of mind, fatuity, and even mania. The analogy is valuable, as illustrating the effect of debilitating remedies in producing fatuity and also mania ; and while the general fact seems to have been proved on a very large scale during Napoleon's Russian campaign,

as it is otherwise known to have happened elsewhere in similar circumstances, there is one very pointed case in Bartholinus, where three young women, from long exposure to cold in an open carriage, became fatuous, and did not recover during a fortnight.

But leaving this analogy to make such impression respecting the subjects under discussion as it may appear to justify, I may proceed to remark, that if palsy and fatuity are produced by intermittents, as I have formerly shown to be the fact, and also by neuralgia, as I have now indicated, while they are similarly produced by cold, and also by many poisons acting on the system, and while also they are the not unfrequent consequences of the depressing passions, all of these coincide to prove that diminution, exhaustion, or partial destruction of the mysterious nervous power, is a direct effect of intermittent and of neuralgia, or of the causes of these. I may now further show, that mania is equally, and not very rarely, the effect also of the neuralgic diseases; particularly, it would seem from experience, when the affected nerves are seated near the brain, or in the external parts of the head. It requires but this to complete the entire analogy as to the corresponding action of neuralgia in producing disorder in the nervous system, and perhaps, correctly speaking, in the brain alone; since I have

just said that mania takes place from cold, and have formerly shown, fully, that it is also a consequence of intermittents or of their cause.

This fact has been already partially stated in a former chapter; and although the mania was, in one case at least, the apparently decided effect of improper evacuations, it does not alter the argument; since, in all the analogous cases, this appears to coincide in power with what we must consider the fundamental cause, in aggravating or determining the effect. And if it is a common remark, though I know not how strictly true, that courses of Cheltenham waters, or of purging, have actually produced Mania, I should not be surprised, were these cases to have been examples of some of the chronic diseases in question, mistaken for some of the disorders already pointed out.

But independently of that, cases of Mania from hemicrania, clavus, headachs, all evidently neuralgiæ, are also recorded by many authors; while, when these effects are attributed by the narrators to the violence of the pain, it is evident in some of the instances, that the degree of this was not sufficient to justify that consequence; while, under any view, an alienation of mind arising from mere pain, is but a temporary delirium. On the principles here laid down, the explanation becomes easy; while the facts in question confirm

those very views which make the mania, not a consequence of the pain, or of the mere suffering, but an independent and associated effect of the general neuralgic disease. I have here referred to the cases of authors, all of whom I have often had occasion to quote; and I could add particulars, whether from such books or from living authorities, to a considerable extent: while from those which I know or understand best, I must determine without hesitation, that the disorder was proper and true mania, and not delirium.

Thus then the entire analogy is rendered complete as to all these associated consequences; whether produced from or by all these disorders, or whether as arising from the other causes just alluded to; while it is almost as unnecessary to insist on the analogy between mania and fatuity, as on that between this state of the nervous system and palsy; the transition of the one into the other being familiar, and there being other connections, associated with the other causes of both or the whole of these diseases, on which it would be beyond the present investigation to dwell in more detail. In this essay, limited as are its objects, I dare proceed no further in this question; but as I hinted when speaking formerly of the mania of intermittents, it will be for physicians to inquire whether they have not too much, entirely I might almost say, neglected one general

source of Mania, and whether, in looking too often for organic derangements, they have not even committed a leading error as to the total causes of this disease. With respect to the occurrence of mania under these circumstances, or to its connection here with fatuity, as far as that relates to the proximate cause of either, it is not difficult to form some broad and general conceptions to justify the possibility *a priori*; but nothing special can be said, or even conceived, on that subject, while we continue in ignorance of the nature of the nervous system and the nervous power; while whatever else I have to offer on that subject, vague as it must be, will find a better place in the last chapter of this work.

Such is a sufficient description of these affections and their modes; while in the preceding descriptions, will be found some examples of cases to which I could, if necessary, have added others. Nor will the mere formal separation of these particular diseases be without its use, if it shall excite such an increased attention to paralytic diseases in general, as to lead to the discrimination of these particular cases and causes; since it is most certain that while they are often directly produced by the debilitating practice in intermittent and neuralgic diseases, they are invariably aggravated by it. If for example, a patient labouring under the apoplectic attack of

intermittent be largely bled, as I formerly showed, he will probably either die or become paralytic permanently, or else he may be thrown into a state of fatuity ; while if the paralytic attack of intermittent be treated in the same manner, that which would have been a temporary disease, passing away entirely in a day or two, or declining gradually, will become a rooted and incurable palsy. In the other case, should palsy supervene on neuralgia, want of knowledge or observation may lead to its being considered as a separate disease, and with the same results ; since the practice in question is too often employed without reflection, mechanically, in all these cases, and rarely indeed omitted when the affection is extensive.

Hence the value of these remarks and these distinctions ; while a long experience, or rather observation of the practice of others, has convinced me that such cases are not uncommon, and that a great number of the paralytic diseases daily met with, have been the direct produce of the erroneous practice in question. How often a palsy may be the actual result of Malaria rather than of cold, I am not prepared even to conjecture ; but when, among six persons, attacked within the same season, in the same spot, by intermittent, two were attacks of palsy, I am inclined to imagine that even this cause is a much

more frequent one than it has ever yet been supposed.

Of the cure in such cases, what I have to suggest, directly, may be contained in a few words; while the great caution is, to avoid the usual debilitating system. Nor while I offer a few hints on this subject, can I extend those beyond the case of paralysis. If it must be always difficult to gain experience as to cases of fatuity, from the general conviction that they are incurable and causeless visitations, such experience as to Mania is unattainable, by an ordinary physician, from the received division of labour in this disease; while this is a case also on which it may be doubted whether that division is a valuable invention. I have therefore no experience as to these particular diseases; though ready to believe that whatever may prove beneficial in the paralytic ones would also be profitable here. To these last I must therefore limit the very few remarks which I have to offer.

Wherever the system to which I have just alluded has been followed, I have invariably seen the cases terminate ill, while in every one that I have seen where nothing at all was done, they have recovered spontaneously; every case that I have myself treated (and they have been numerous), having been cured, even though the intermittent remained or reappeared. I might



therefore say that no remedies were necessary ; or that, when intermittent was present, we should simply attend to that disease ; though I think it expedient that purgatives, but not the highly debilitating ones, should be used ; imagining, that, under a moderate practice of this kind, at least at the commencement, the disorder has, in my experience, terminated more rapidly. As far as local remedies, short of cupping or leeches, can serve to amuse the patient and give the appearance of acting, they are, of course, admissible ; and thus also may we have recourse to those internal stimulants habitually used in ancient palsies, since these coincide with the general system of cure in all the diseases under consideration.

Now, under the obscurity which attends all cases of direct and primary palsy, without previous apoplexy, and particularly as occurring in young subjects, I cannot avoid extending these remarks somewhat further, that I may be sure of embracing the cases for which I cannot, with certainty, assign the cause.

If Intermittent is produced by cold as well as by Malaria, if Neuralgia under its many forms is much more satisfactorily proved to be produced in the same manner, and if Intermittent and Neuralgia, both, can produce palsy or be accompanied by it, all of these being facts proved, there

may be a much more intimate connection between direct primary palsy and Neuralgia than we are yet aware of, or the actual condition of the nerves under the former disease may bear some resemblance or analogy to that which exists in the latter. And the exciting cause also may often truly be the same, though acting here in a manner somewhat more rare than it does in general; while, as to the proximate cause, in any case, we are as yet most profoundly ignorant. That the former is so in the instances of palsy following cold, is plain; and, here, it becomes truly probable that the proximate cause, or the morbid condition of the nerves is also, in the direct palsy of this nature, what it is in the palsy accompanying or following intermittent and Neuralgia.

These are but analogical arguments, I am aware; but none better founded can be produced until we become acquainted with the real condition of the nerves under these diseases, or have mastered the proximate cause. Yet they involve a high degree of probability as to the real resemblance among these apparently different palsies; and if that probability can be rendered a certainty, this should become a guide to the practice; since that which has been found injurious in the palsy of neuralgia and intermittent, should also be injurious in every primary palsy, or the reverse. And further, if a careful observation of the actual

practice and its results, shall confirm this view, then have we all the evidence which we have in so much more that belongs to physic, and at least sufficient to form the basis of a rule of practice, until we have arrived at a more profound knowledge of the pathology of the nerves.

I cannot here venture to treat the whole subject of palsy, as it would form an unjustifiable digression from the main subject: but I am backed by a great weight of authority from the most ancient times of physic, when I declare my belief that the treatment of simple palsy by the evacuant system is pernicious, and my further conviction that it is actually, and at the present day, the cause of the diseases which it undertakes to cure: that it not merely aggravates and renders permanent, attacks of palsy which would otherwise be transitory, but that it induces on those a variety of accessory evils; and further, that, in itself, it produces cases of palsy that would never have occurred; and all this without regard to the cause, or without my supposing it necessary that this should have been Malaria, or that the disease should in any way have been connected with Neuralgia or Intermittent,

Were I here justified in going more deeply into this question, I might easily extend these arguments much further; and embrace also the whole as it concerns apoplexy no less than palsy.

I am as little entitled to do this now, as I am unwilling to enter upon a criticism which would then become unavoidable, upon the many very loose writings, comprising even very recent ones, which have appeared on this subject: but I will refer to the opinions and experiments of Serres for some particulars, which, in spite of the opposition they have experienced, are of more real value on this question than any thing which has yet been written respecting it.

If it is said that no competent physician would confound a palsy really requiring blood-letting with one demanding the opposite treatment, this is not the question in hand, but what the practice actually is, when we take the entire mass of cases and the entire mass of practitioners. And if this be done, I believe it will be safe to say, that in ninety-nine cases of a hundred of recent palsy, blood-letting is used as the first remedy, without inquiry as to the cause, or without regard to the state of the patient, or to any one circumstance; while if the least justification can be found for repeating and renewing it, though that be a mistaken one, and often without any justification at all, it is repeated, together with the rest of the system, till the patient's state becomes hopeless or he is despatched to his grave. Most generally also, this is a merely empirical practice, mechanically followed, like so much more in

physic; while if there be a theory, it is the sweeping, and most often false one, that the disease is in the brain, and consists of effusion, or excess of action, or aught else which may appear to justify such practice; while it seems also to be forgotten that a portion of the nervous system can and does suffer, not only loss of power, but other diseases, independently of the brain, or independently of excess of action in the circulating system: as happens in paraplegia from partial cold, from poisons, local or otherwise, such as in the case of lead in both modes, or from intermittent, or as the consequence of Neuralgia.

But I dare not pursue much further a subject which would lead me beyond my proper limits, while I must however point out one fact, in medical arithmetic, which seems strongly to confirm what I have here said respecting the erroneous treatment of palsy. Its recent increase, in point of numbers, is matter of familiar observation; and it will be found to have commenced and kept pace, as nearly as that can be estimated, with the enormous recent increase in the frequency and severity of the evacuant and debilitating system; while the study of individual cases can leave little doubt, that the latter is the cause, when it appears a necessary consequence to vulgar observers, and to those who, following an imaginary system of cure, do not perceive

that they are themselves the causes of the diseases which they erroneously strive to remedy.

If I could fill pages with cases illustrative of this assertion, I must be content with much less ; because I dare not enlarge further on a subject that falls somewhat beyond my own boundary line, and because I have already pointed out instances, within that limit, where the bad effects in question have followed from that practice, in cases decidedly connected with intermittent.

In one of those, the subject, a slender and delicate man of middle age, had been exposed to cold, while in a state of inaction, for so many hours, that on attempting to move, he was thoroughly benumbed and partially insensible. A surgeon, who chanced unfortunately to be present, conceived that he was about to suffer apoplexy, (it would be difficult to conjecture why,) and immediately proceeded to perform venesection. This was followed directly, by an imperfect hemiplegia, or an increase of the numbness and insensibility on one side ; and as palsy must necessarily justify bleeding, the operation was repeated, together with all the other aids, till a complete hemiplegia was the consequence. More blood-letting, more cupping, and more of all the usual remedies of this class, brought on at length, and gradually, but not under a twelvemonth, epilepsy, fatuity, and death ; each addition of the

artificial debility aggravating the disease, while each aggravation, attributed as usual to the disease, and not to the remedy, was followed by the more vigorous use of this.

But this, in some form, is of every day occurrence; and I may now give a case of the reverse treatment. Under the very same circumstances, another person was seized with a similar attack, in the same manner, and in the same place; while the effect of cold had proceeded so much further, that the power of speech was nearly gone, as were the intellectual faculties. The same theory was offered, and the same proposal made; but the practitioner chanced to take a different view of the cause and case, and this patient, by the aid of heat, and of wine given liberally, was perfectly restored to health within twelve hours. That the event would have been what it was in the former case, had the treatment been the same, is most undoubted; but few, unfortunately, whether patients or ordinary practitioners, view events in this manner; the former, as I once before remarked, giving the discerning and successful physician no credit for the prevention of a disease, while they reserve all the praise for him whose malpractice has produced or aggravated one, but whom kind nature has opposed in the production of absolute death; while the blind practitioner goes on as

usual, unable to anticipate what might have happened but has not, because he can see nothing but what is before his eyes, and is incapable of reasoning, inasmuch as he has no grounds and no philosophy. Thus is it the daily fate of him who can foresee events because he knows their causes, to prophesy, like Cassandra, and, like Cassandra, not be credited; and thus, in other cases, does he deprive himself of all his rewards, of profit and praise alike, because, foreseeing, he has also prevented. Hence also does fame follow, as it precedes, the Sangrados: since, under the same discerning philosophy, it is to him of most deaths that the most difficult cases have fallen, while, for them, he has of course exhausted all the skill of all physic. "All that could be done has been done:" but the angel of death is he who knows where was his best ally.

To conclude, if throughout this work, I have thought it a duty to draw all my inferences from my own observations, considering that thus only I could avoid being misled, or prejudiced, or thus at least avoid adding one more copy or compilation to the heap in which physic abounds, and if every authority which I have here introduced was not sought for till after the entire work was written, I am the more pleased that I can find authorities on any point, to confirm what had



occurred to myself; while such a concurrence of views between different persons, all equally unbiassed by each other, ought, to the reader, to be an additional warranty for their truth.

Thus, on the subject of the connection of palsy with Neuralgia, I find numerous cases, of which however I need notice but two, as I consider it a point established. It is from Cooke that I quote a case of C. Bell's, where palsy with great debility followed what he calls an inflammation of a nerve. And in this case, the ulnar and fibular nerves were affected, and as it appears from the sketch, for two years; the nerves being tender, or suffering from a slight pressure, while the pains were periodical; alternating, further, between the feet and the hands. It is impossible to find a better marked case of the regular intermittent Neuralgia, even to the tenderness as I have here described it: while in addition to the fact of the paralytic consequences, for which I have chiefly quoted it, it is plain that it was not so considered, at least by the author from whom I borrow it: besides which, the having called it inflammation of a nerve, while it proves that its nature was not understood, is a circumstance which tends to confirm the criticism which I have here made on a reputed inflammation of the spinal marrow.

In a case of Pearson's, where the Neuralgia

was in the thumb, there was a partial palsy of the brachial muscles, with pain and debility of the lower extremities, attended by nearly an utter inability in walking. These are, all of them, symptoms which have been here pointed out on several occasions, as occurring where there was much general disease besides the local one; nor have I any doubt that the usual symptoms of chronic intermittent were present in this case, or that there had existed a previous disorder of this kind; while it is plain, from the mode of practice adopted, namely, by excoriation, although it proved successful, that a correct view of its nature had not been formed.

These two cases may suffice: and I have more than once said what I am here desirous of repeating, that while I regret the necessity of such criticism, I consider it most necessary; and the more necessary, the higher are the authorities by which such incorrect views have been entertained and such inefficient or pernicious practices recommended. It is true, that to explain any physician's case otherwise than as he has explained it himself, can scarcely fail to be offensive, while it must needs be often hazardous; but while, without this, I could not possibly enforce what I have here held out, to those who have not as yet made up their minds as to these diseases, or who have yet to learn, it is also import-

ant that obscure cases should, as far as possible, be removed from the class of mysteries, and reduced under the principles to which they belong.

This explanation will, I trust, be received as an apology by those whom it may interest; and I therefore shall not scruple to add, that when, by one writer of note, blisters and vesicating liniments are recommended in these cases, the disease has not been understood; and that when another of no less name recommends leeches, cathartics, the local application of laudanum, opium, and colchicum, going a round of experimental remedies, it is a proof that he had formed, not simply an incorrect opinion, but no definite opinion at all of the nature of this peculiar variety, nor I may add, of Neuralgia in any form. And whatever exceptions there may be, unknown to me, this criticism, as far as I do read or converse, includes the profession at large; while, when I perceive in Swan, Heberden, and others, occasional instances of a correct treatment, it is still without corresponding views, as is proved by the vacillation of the practice: by changing from the useful remedies to those of a directly opposite nature, or, not unfrequently, by a general traversing of the whole pharmacopœia. If Hill has used arsenic, as others have recommended iron, it is just as Heberden included bark among his attempts on this disease.

And let me remark in justification of this criticism, that while I have here proved these remedies to have been used empirically, no confidence can ever be reposed as to the adoption and application of any empirical remedy, though it should even be a proper one, until the principles to which it should be affiliated have been explained. It is the fate of such expedients to be abandoned as they have been adopted, under casual disappointment: and it is therefore only when we know what their principles of action really are, that we are induced seriously to trust to them, to persevere in them, to modify their application, or, after failures which we can often thus learn to explain, to return to them again. It is true that we do not know how the tonic remedies, as they are called, act, even in the case of intermittent: but we have learned by experience that they are the remedies, and we have also learned how to apply them and modify their use, which is nearly all that we know of any remedies in any disease. The object is therefore attained as far as it can be, when Neuralgia has, on this ground, been associated to intermittent: and thus, even had the true remedies been always adopted in an empirical manner, which is far indeed from having been the fact, a great gain would have been effected by removing them and associating them in the manner I have here attempted.

Such is the criticism which I considered an inevitable duty; and I have purposely avoided naming individual authors as far as this could be done. I will not therefore quote further cases or further opinions; that I may as far as possible escape this disagreeable task; but shall refer those who desire to see what has been done and thought on this entire subject of Neuralgia, to Herberden, Pujol, Sauvages, Fothergill, Hutchinson, Bew, Lizars, Carlisle, Ash, Hill, as to others whom I have been obliged to quote more pointedly, and to many more whom I need not here name.

## CHAPTER XIII.

### *On the Cure of Neuralgia in general.*

IF I am right in my theory of Neuralgia, if it is a disease, under whatever form it occurs, depending on a constitutional cause or derangement; though the prominent symptoms are local, and if it be a mode of intermittent fever, or, fundamentally of the same nature, it might have been anticipated that I should have recommended the same system of cure, even had I not already been compelled, in treating some of its varieties, to enter partially on that subject. On this view, in fact, was founded, far more than twenty years ago, the system of practice which I applied to these disorders; or it was a theoretical mode of cure, derived from that theory of the disease in general which I then thought the true one, and which a continuous observation, ever since that time, has tended to confirm. And if the theory has been thus confirmed, so have the correctness and utility of the practice; as it has never failed me in any case of recent origin or moderate duration, as it has even succeeded in numerous instances of very long standing, and in many, at the same time, which I had received from other

practitioners as incurable diseases ; failing only in those inveterately chronic cases, analogous to the simple intermittents of this same character in which the same remedies equally fail ; and further, being chiefly unsuccessful, possibly, when the visceral glands have been hopelessly diseased.

Though I cannot well avoid detailing the modes of cure in this separate section, since the omission would leave a blank to many medical, and to all popular readers, should such there be, it is plain that I must do it under considerable repetition ; since much of the detail must resemble what has already been said on that subject in the case of intermittent. And also, as under some of the varieties that have been described, I could not avoid entering partially on the subject of the cure, on account of certain peculiarities attending those, and because a general account of the mode of cure would have been confused by those particular details, I must claim the indulgence of the reader for what must be considered a blemish in every composition pretending to philosophy. It must form my apology for this, as for all defects of arrangement and all prolongation, that my task was a very complicated one ; since it has not consisted in a mere description of acknowledged diseases, but in a complicated attempt to establish, to prove,

and to describe, and further, to pull down, not one building but a variety of old ones, and on their ruins and from their materials, to erect a totally new structure, and one as single and simple as it is new.

In treating of this subject, I must equally, as on former occasions, take notice of what I consider to be wrong in the past and the present practice, while I describe what I conceive to be right; becoming thus again a compelled critic, as must be every one who, in attempting reform, must oppose prevailing or general opinion. And if it is always necessary to combat most strongly where the opposed authority is the most powerful, no where can this be more necessary than where that authority consists in universal opinion. It is, still, an odious office; but I know not who ever succeeded in steering exactly between that criticism of imputed error which the opposed party brands with the term acrimony or worse, and that timidity of over caution which defeats the object in view; leaving the truth, if truth it be, to quail and fly before the enemy to which it shows a misplaced tenderness. Where no offence is intended, it is a weak timidity that fears lest it should be taken; as it is a vicious one which suppresses what it deems useful, from personal apprehension or a cowardly love of peace.

The first remark which I must here make



respecting the Cure of all the Neuralgiæ, though already made more than once, is that they often disappear without medicines, and even without apparent remedies of any kind, by a spontaneous action of the constitution; while they are also truly cured by circumstances that are not noticed, and to which the credit is not given. And it is an important remark; because it often explains the reputation which has been gained by particular modes of cure, which have been, in reality, either nugatory or injurious in themselves. And thus it is that improper practices are persevered in from mistaken observation: a conclusion which I might apply in great detail to every mode of Neuralgia, and also, as I have in fact, already done, to Intermittent.

If these spontaneous cures are most frequent in a recent disease, they are not uncommon even in the most confirmed ones; and they seem, in these latter cases, connected with that entire change in the constitution, at some age, often, vulgarly called climacteric, which is marked by many other well known circumstances, and, in females, by one too familiar to name. Thus it is that in this sex, very remarkably, the nervous diseases of many previous years vanish at this time; as, under this particular head, the tooth-ach will very generally be found to do; as well as that tendency to the frequent petty or nervous

fevers which belong to remittent or intermittent, and much more that I need not detail.

In both forms, whether recent or chronic, neuralgiæ of all kinds cease also on the occurrence of some other principal disease, as equally happens in intermittent: though perhaps the most frequent of the real, but little observed causes of a cure, will be found in change of air, as it is called, or a general change of habits. And this, in fact, is a direct remedy of great power; while it is amusing to remark how often it is actually used, when the practitioner himself has not so intended it, when he has applied to it from despair or weariness, or that he might rid himself of a patient's reproaches, or when, mistaking the nature of the disease, he has resorted, either blindly or for some other purpose, to such an expedient.

Thus also are all the neuralgiæ, and the recent ones in particular, occasionally cured by mental impressions, as I have shown with respect to intermittent generally; and numerous and powerful as these are, peculiarly extensive as they sometimes prove in our own country, from well known causes depending on the condition of England, they must be considered as amongst the most frequent of the unobserved modes of cure, causing a great extent of error with respect to the operation of presumed remedies. And amongst these, if apparently trivial, must be ranked a

cause often no less efficacious than it has been made a subject of ridicule, namely a change of physicians, or the acquisition of a new and strong confidence in a new and reputed person. Hence an actual benefit often derived from empirical remedies and empirics, or from physicians of popular if false reputation, or of peculiar, perhaps insolent or coarse manners: an influence extending widely over all the nervous disorders, of which so many occur from the general cause of disease which includes the subjects of this essay.

This in reality is the cure by charms; but in the present state of society there is little chance of benefit by direct methods of this kind. Physic however does furnish even these means; as there is scarcely an individual existing, even of the most enlightened mind and liberal education, who can view medicines as acting according to scientific and rational principles, and who does not, in reality, place that kind of confidence in their powers which marks the belief of the early and uncivilized stages of society; viewing them as mysterious agents, almost as incantations, however he may disclaim the opinion when thus dissected and presented to him. Hence that universal confidence in substances and formulæ and numbers and quantity, and hence especially that enormous consumption of Empirical remedies; compounds found in every pharmacopœia, but divested of all

their virtues under this form, because separated from the mystery and the incantation. The physician who attempts to reason with his patient on the effects and utility of his remedies, pays a most unmerited compliment to human reason: and while he will fail to influence, he will not be very long in discovering that he will shortly have no patients to enlighten or to cure. With the loss of the mystery, the merit is at an end: and he who proves himself to be the true philosopher and physician, is precisely the man who will never be trusted.

If medicines, even be they bread pills duly concealed, form a mode of cure in the Neuralgia, as charms, the same effects are produced by any other folly or superstition to which fashion may have given its sanction among the foolish and the superstitious. Hence the real, not fictitious effects of animal magnetism, metallic tractors, and the like; and thus it is that an appended magnet does truly cure the toothach; this being the Neuralgia of all others which is subject to be transitory, or not firmly fixed in the habit; just as it is frequently removed by the sight of the instrument or the operator, as I formerly remarked. And how efficacious a system of charming, when believed in, is, I once witnessed amply, in an old woman who had this reputation, and whose suc-

cess among the lower orders was very great; while I was induced by curiosity to send her a case of Neuralgia (Tic) which I had, for some length of time, treated in vain with arsenic, and which ceased immediately after the application of the charm, consisting in some gibberish.

How far such modes of cure can be adopted and rendered applicable to patients, must be left to the ingenuity and observation of practitioners. If of little real value, it was not the less necessary to point them out, as explaining in a great degree the false reputation acquired by many medicines.

As happens in Intermittent, a fit of Neuralgia is often prevented by stimulants and narcotics given before the paroxysm: and, on the same principle that the disease itself is cured in the former cases, that is, by breaking the habit of recurrence, may the entire Neuralgia also be removed. I need not specify, either the substances or the mode of administration, since this was sufficiently explained in treating of the cure of Intermittent on this principle: but it is an auxiliary at least, if no more, that ought not to be neglected wherever a reasonable prospect of utility appears. This partly explains the effect of Intoxication in removing such disorders: though as that will act advantageously at whatever time

it happens to be adopted, it is probable that it operates by exciting another action, or a temporary artificial disease, in the system.

I conjecture that we must thus also explain the action of the narcotics, which have been so strongly recommended in Neuralgia, and administered in such an outrageous manner. They are not however the real remedies of this disease in any of its forms; while, as administered to diminish the pain, they are of very small value. Whoever has trusted to them much, will know from his own experience that I advance here nothing but the truth; while I have myself received from other practitioners, many cases where they had been pushed to even a dangerous extent, without the slightest advantage, and where the disease was speedily cured afterwards by a proper administration of bark. It is abundantly obvious that they have been recommended and adopted without a correct view, or any view at all, of the theory or nature of this class of diseases: empirical remedies against a symptom, according to the usual mechanical practice of physic; means of quelling pain, without inquiring from what that pain proceeded.

And on the same empirical system, the whole army of these poisons has been mustered, from opium to belladonna; while an occasional success, from some of the causes already stated, has

been made the ground of a general recommendation. I am even suspicious that they have done harm; having seen one case of mania immediately following their extravagant use in the Tic, and in a patient who could not have been suspected in the most remote degree, of such a previous tendency; while the entire freedom from that disease for thirty years, through the whole of life in fact, after a duration of two months, confirmed this opinion. Nevertheless, that the narcotics were the exciting cause, is little more than a suspicion; inasmuch as mania is the produce of the disease itself, though probably not unless aided by improper treatment, and particularly by the evacuant system.

But the chief and the most energetic remedies in Neuralgia, be the form what it may, are the tonics; and of these, as in intermittent, the most efficacious are bark and arsenic. Each, in its class, may stand at the head of a list which it is fruitless to enumerate, since it is so well known to even every druggist; nor need I repeat what relates to the mode of using these, since it is precisely the same as in intermittent fever. That there is any one vegetable tonic more efficacious than bark, or differing in the mode of action, as far as we now know these remedies and their powers, I am inclined to doubt: but not to deny that such do exist, since I consider that we are

very far from having exhausted the medicines of the vegetable kingdom ; so far indeed, as rather to be in an absolute infancy of knowledge on this subject.

If modern physic has done wisely in rejecting the endless and useless list of the plants found in ancient pharmacopœias, it has shown very little wisdom in resting nearly content with what it has retained ; particularly in an age when the great extension of experimental and accurate philosophy, and the absolute creation, we may almost call it, of a new chemistry, added to which, I might say, the almost further creation of a particular branch of this as to vegetables, have furnished means of accurate investigation formerly unknown as unsuspected. The very fact that a plant so void of obviously sensible qualities as *Digitalis*, should possess the extraordinary, if yet almost useless powers which it does, ought to be in itself a sufficient stimulus to investigations of this nature ; a temptation too, much increased by the recent facts which chemistry has proved and is daily augmenting, respecting the infinite variety of radical or essential compounds or bases.

To return ; while, with bark as the type, the physician may command the whole range of astringents, aromatics, and bitters, he is also bound to try one where another fails ; since thus may it



possibly be discovered, even that what is most efficacious in common intermittent may not be most so in the Neuralgiæ, differing as they do in respect to the local action in the latter. But as I can, on this, say nothing of any great value from my own experience, I must be satisfied with having pointed out the leading principle and the road to be followed; as I need also do no more than suggest those combinations, whether of these vegetable substances themselves, or of the same with narcotics, the occasionally superior value of which in intermittent is well known.

If arsenic be admitted as the type of the metallic remedies, it is equally easy for the physician to command the whole range of these: so well known, that I could add nothing respecting their powers; while I much suspect that very fanciful values have often been attached to some of them, from that common mechanical system which looks more to variety of medicines than to a knowledge of diseases. Much has indeed been lately said respecting the especial value of the carbonate of iron (as it is generally called) in the common Neuralgia (Tic); while in reality it has been administered as a merely empirical remedy, and without system. In my own experience, I had resorted to it long before these recommendations, both in intermittent and Neuralgia; but without discovering that it possessed

any collateral merit above arsenic, while far less generally efficacious as a remedy. But, on all these remedies, I shall be very glad to hear of the experience of others, since I have wanted both temptation and opportunity to do them justice. As to the value of arsenic compared to bark, I can only repeat what I said formerly, that I have found it more generally efficacious in Neuralgia, while it has appeared less so in intermittent: often acting almost like a charm on the pain, and even in cases of many years' duration. But on this also I am ready to be corrected; as I am satisfied that the experience of no one individual, even were it far greater than mine has been, is sufficient to decide on subjects of this nature.

If I have thus said all that appears necessary on what I consider the essential or fundamental remedies of Neuralgia, I must also add that I make no distinction as to the forms of the disease; except that I must hesitate as to sciatica, from want of sufficient experience in that variety. I should here however repeat, what I ought not to omit in this place, that from a medical friend residing in a district where this disease is common, or endemic, to whom I had recommended this plan, I have received the strongest testimony, (added to thanks,) of the value of arsenic. In every other form, the success has been simi-

lar, and, in every case of moderate duration, satisfactory ; though less so, as I shall presently show, in ancient cases. Thus, whether it be the Tic, or the similar neuralgic pain of other distant nerves, or the hemicrania, or the toothach, or the rheumatism of the face, or the rheumatic ophthalmia, the use and efficacy of these remedies is the same, with such additions respecting particular cases, as I have already passed under review in their proper places. And it is also the same, as I formerly remarked, even when the Neuralgia is the produce of local injury.

But I must now remark, that there are two leading circumstances under which they very often disappoint us, and where, unfortunately, as in the case of intermittent similarly modified, physic has as yet discovered no expedient to supply their place, while I have none to offer.

This happens, first, when the attacks of the disease are very irregular, and, secondly, when the disorder is of very long standing ; while, in exact correspondence to intermittent, these two states are very commonly united. But if we often fail in such cases, we are not absolutely without some means of attempting relief, and those attempts are often also successful.

In irregular or ill marked intermittent, when recent, or not of very long standing, and particularly if other circumstances justify it, a single

blood-letting will sometimes render the type regular, as I formerly remarked ; and thus, though I have no experience to prove it, I should not hesitate to make the same attempt in a Neuralgia, under the same circumstances, though convinced of the infinite evil of this system when persisted in. The same effect will sometimes also be produced by an emetic, but perhaps much more frequently and advantageously by purgatives, and especially by calomel ; while, as a mere speculation, it is always advisable to have recourse to such medicines, as a preliminary to the administration of arsenic or bark.

Thus also does mercury, given so as to affect the constitution, in Neuralgia or in intermittent, sometimes cause these tonic remedies to be efficacious when they have failed before ; while it is also, in itself, an occasional cure. It is possible, that, in this last case, its useful action may resemble that of the other metallic substances, whatever that action, called tonic, be : while, apparently also, it acts here as in intermittent, in exciting another disease, or a new action in the system. Whether, in the former case, or in the latter, it acts by affecting advantageously diseased visceral glands, is a question which I cannot answer ; while if I do not disbelieve it, neither am I willing to believe what has not been demonstrated, and which is not proved because it is

popularly believed, like much more in the lax philosophy of physic. But be the theory what it may, a judicious physician will, without further detail, see in what cases, in what mode, and to what extent, he may resort to mercury in the Neuralgiæ, and in what manner he may unite its use to that of the essential remedies.

But it is in the Neuralgia when inveterately chronic that we are most often foiled; and as, unfortunately, the greater number of cases which apply for relief must now be of this nature, from that want of success hitherto, arising from a deficient method of cure, which has rendered the majority of cases chronic ones, and perhaps still more from a pernicious system of treatment which has confirmed many so as to render them truly incurable, the consequence has been to throw a doubt on the value of the remedies here recommended. It is plain therefore, that, if we take cases arithmetically, these remedies cannot have a fair trial; nor will this happen until many years have passed; until the incurable, long-standing cases have died away, and a new generation of the same diseases shall arise under a new practice. I shall be much mistaken, though I shall not live to see it, if Neuralgia will not then be found a tractable disease compared to what it has hitherto been; or even than it would be now, were the most correct imaginable prac-

tice adopted tomorrow ; that it will at least produce no greater average of rebellious cases than Intermittent, though, even then, the world at large will be deeply indebted to him who shall discover the means of alleviating these curses, or rather, these varieties of one wide and deep curse.

But there is yet another reason, which, while it tends greatly to render Neuralgia chronic and incurable, will long be an obstruction to a fair judgment on the value of these remedies ; as long at least as till they shall become universally empirical, like medicine in general ; if indeed we can ever look with satisfaction to empirical medicine. This is the changeableness, or the caprice, of patients, or their impatience. Anxious, very naturally, for a speedy cure, but without discernment to choose, and without reason to be convinced, led away in succession by name after name and recommendation after recommendation, the result is that no steady system is pursued, that the work, perhaps half done by one, is reversed by the next ; and that even he who could effect the object, were he granted time and confidence in what demands both, is foiled, and perhaps even induced to doubt the value of the means which he has not been allowed fairly to use. It is the chronic disease especially, be it this or any other, which, above all, demands one, continuous phy-

sician and system ; while, by an unlucky perversion of reasoning, unlucky however for themselves alone, since to the profession at large it is a profitable one, it is exactly the situation in which the sick forget their own interests, to change from physician to physician.

To proceed. In such inveterate cases especially, but in all, in fact, the first and fundamental proceeding should be to examine the habitation or situation of the patient, and to remove him from the causes, if causes be present. Here it is, that a critical knowledge of the laws of Malaria, and a nice discernment as to ground, or soils, becomes of the highest importance ; and here then we see, as in Intermittent, how a careful study and an accurate knowledge of what forms the first part of this Essay, is indispensable to every practitioner in medicine ; while patients at least may grieve to reflect how utterly the fact is otherwise.

Without such removal from the exciting causes, a permanent cure in such cases is almost hopeless ; while he who knows how to perform his duty and does perform it, will equally take care to explain to the patient what he is to avoid in a new residence or in travel : labouring to impress him, if I may use a term almost ludicrous, with an absolute hydrophobia.

This alone may be the cure ; while it is also

plain that as far as change of air or habits is a remedy, it will operate in two ways. And therefore, in any case, though the actual situation be free of suspicion, it is to such change of place or air that we must trust as the leading remedy; a remedy in reality which succeeds often, after every thing else has failed, here and in the chronic intermittent equally. And as far as there is a choice of air or place, that change should evidently be to a dry soil and a free air; yet not to a cold one, since cold is in itself a renewing cause. Hence the obvious additional caution respecting exposure to cold, especially to night air, dews, east winds, and so forth; while I have no doubt, and from sufficient experience, that the far greater number of the habitual cases of Neuralgia are rendered such by the continued application or frequent repetition of the original causes; each attack being a new disease, in a certain sense, in a susceptible habit: facts which show most strongly the necessity of a correct theory, as they bespeak past inattention and ignorance. On the necessity of warm clothing in aid of this, it would be superfluous to dwell.

Before I quit this subject, change of air, I must introduce a fact of some importance, although somewhat out of place, since it relates to fever and not to Neuralgia: the apology being that I was not in possession of the information



when that volume was printed. From the judgment which I am compelled to form on the materials furnished, the case of Alicante, in 1811 and 1812, offers an example of peculiar value as to the advantages of removal in the case of such endemics; whenever at least, a government possesses sufficient powers in sanitary police. In this case indeed, the proceeding was itself founded in error, as the fever was judged contagious; but I cannot yield my opinion even to that of the Physician Lanuza, any more than to the popular one. The error is too general to be remarkable: but the facts furnished me by the inspector of health, Morillo, himself employed in the cordon of exclusion, are unanswerable. It is true that the fever ceased on removing the sick to the country; but not one instance occurred of the disorder having been communicated personally, while this much-discussed fever was then limited, and always has been so, to one portion of the sea coast, and while further it has always occurred in the season, as well as in the place, of remittent fevers, and in no other. The contagious imported fever of Gibraltar, joined to vulgar opinion, appears to have misled the public at large on this subject; but if my own opinion be correct, as I esteem it, it is peculiarly important to remark that an endemic remittent may exist within a town in such a manner as to deceive, from the numbers

affected and other causes, just as it has so often produced similar deceptions in ships, and that in such cases it will be as effectually checked by removal to a salubrious spot as if it had been a contagious one, though on different principles. To return from this slight, and not absolute digression.

Supposing all these preliminary cautions taken, the rational object, as to medicines, is to attempt the cure of the attack by all the means already described, as soon as it appears, and as often as it returns. Like intermittent, it is a disease of habit: and by a perpetual interruption of that habit, it must be met. And here it is, that the interest of the patient is also especially concerned in placing his confidence in some one individual; giving him the charge with the means, and not arguing, as usual, that the disorder returns because he knows not how to cure it.

What remains as to the general treatment, relates to diet. As in intermittent, whether recent or chronic, I have no hesitation in saying that the usual full diet of persons in health, with a rational use of wine, forms an essential aid to the cure; and that it has often proved a cure in itself, when used as replacing the opposite and pernicious system. But I shall not enlarge on this; as the evils arising from low diet are involved in those belonging to the debilitating

practice on which, even after all that I have said, I must offer some additional remarks hereafter.

It still remains to notice the local remedies which have been thought of use in the Neuralgiæ; though in speaking of these, I may now omit what concerns this ophthalmia, and the toothach in its several forms.

Attempts, proceeding as usual on no principle but the vague one of relieving pain, have been made to remove that of Neuralgia, whenever occurring, by the application of stimulant and narcotic substances: a long list too well known to require enumeration. As resorted to for headaches and rheumatism of the face, the use of camphor, opium, alcohol, ether, essential oils, and so forth, are peculiarly familiar; and similar practices are scarcely less so in sciatica. In the slenderer cases or attacks, this kind of practice does occasionally give temporary relief, but without doing more; but it is fruitless to expect advantages from it in decided cases, or severe affections of this nature, be they what they may; while, to hope for a permanent cure in this manner, otherwise than casually, and through the influence of the imagination, is little less than childish. Nevertheless, as no inconvenience can arise from these remedies, beyond the trouble and expense, and as they serve for occupation both to physician and patient, they may be permitted

to take their turn as usual, provided they do not supersede what is more essential.

As I formerly observed, however, I cannot speak in the same accommodating language respecting blisters, though distinctions are here necessary. I have never yet seen a case where, if the blister was applied near to the disordered nerve, the pain was not aggravated; at least this happens remarkably with regard to the general pain which appears to have its seat in the ultimate ramifications, and, consequently, to be in the skin. Such also, I have since found, was the experience of Heberden: though whatever may be the merit of his essay, it is plain, as I formerly remarked, that he had formed no theory of the disease, and that his practice, even when he succeeded in curing it by bark, was purely tentative and empirical. And very often, where that particular pain was not present before, it is induced by those applications; while, in the other cases, the extent, as well as the severity, is often increased in an extraordinary manner, particularly should the application be extensive or persisted in. What is called a perpetual blister, is almost always a positive aggravation, not only of the local disease itself, but of the general irritability and disorder of the system, which are often sufficiently severe in themselves. But I can understand how blistering, particularly if severe,

applied to a somewhat distant part, may sometimes relieve the Neuralgia, on the principles already laid down of exciting a counter impression, or a new disease: an effect indeed that may even follow where this remedy has been applied on the part itself. Such is the explanation of Pearson's case, where a severe disease of this nature was cured, yet, not till after much time and very violent treatment, by the use of rubefacient, or rather excoriating applications; while I may remark on this case, as I have done respecting Heberden, that the practice was similarly tentative, and that no theory of the disease had been formed. Such seems the method of analyzing and estimating the use and action of this class of applications; and it will remain for physicians to judge how far they will continue to make use of it in particular cases, as an aid however, rather than as a means of cure.

What I have said on this subject is equally applicable to issues and setons, with such modification as the obvious differences may here render necessary. It will be easy to see where the local disease thus artificially produced, will increase the local evil: while it will be not less so to judge of the bad effects of setons, particularly if active, on that principle already laid down, which condemns, in all these disorders, the adoption of evacuating and debilitating proceed-

ings. On this and the last subject, I might have made the application particularly to sciatica; but having less experience in this particular modification than I think necessary to allow me to speak respecting its peculiarities, I shall only request of physicians that they will review their own experience and practice in it; taking care that they do not mislead themselves respecting the imaginary effects of their remedies; so common a source of error in all the Neuralgiæ. The great points to be kept in view respecting all these local applications, are these; that the disease is a general or constitutional one fundamentally, not purely a local one, and that the local affection is not one of the circulating system, to be eradicated, as certain inflammations are, by a counteraction, or by exciting a diverting action in the neighbouring vessels. To act here on this principle, is to pursue that mechanical and unreflecting system of practice which I have so often condemned.

Hopes have been entertained respecting the utility of electricity and galvanism; not unnaturally, however empirical the views. It might indeed, even on a more correct theory of the disorder, be almost expected that the electric shock at least, acting so distinctly on a nerve, and capable of being directed very near to a diseased one, if not exactly through it, might have the power

of really changing its disordered action ; but while my own attempts, pursued on a very great scale for very many years in a military hospital, and for the direct purpose of ascertaining the value of this remedy, have had no success whatever, I cannot find that others have been more fortunate ; though I can easily imagine that such a disease might thus be cured through the influence of the imagination. As to the Galvanic electricity, the impression is comparatively too trifling to permit us to believe that it can be of any value ; and the same remark applies to the gentler electrical operations.

The only local remedy from which I have really seen such advantageous effects as to induce me to recommend it, is the application of steam directed by the usual means of a pipe, to the affected part ; while of course, the same reasoning applies, if in a minor degree, to fomentations and hot water. The value of these latter applications, indeed, in rheumatism of the face, in the rheumatic or neuralgic ophthalmia, and in sciatica, has long been known ; if, from their too great simplicity, and their not being " made up in the apothecary's shop," they are less valued than they deserve. But while I consider the blast of steam as the most effective of all the modifications of this practice, I have often succeeded by means of it, in removing, almost instantaneously,

a paroxysm of the severest Neuralgia of the face, and, occasionally, so as to put a stop, in the chronic disease, to an entire relapse, which, from all the patient's past experience, was expected to last some weeks. Should this success be confirmed by the trials of others, it will therefore become an auxiliary at least of some value; while I have already attempted to impress on my readers the necessity of meeting the attacks on all occasions, for the purpose of breaking through the habit in that which, like chronic intermittent, is often a disease of pure habit.

But even where this application does not remove the proper neuralgic pain, it is still a valuable auxiliary; and as far as the particular purpose here in view is to be served, I know not that it has ever failed me. In many cases, as I have often already remarked, there is a diffused and general pain, distinct from that of the nerve itself, arising from an affection of the minute ramifications, as there are pains also propagated, at times, along the communicating greater branches. And further, in very severe fits of Neuralgia, it almost always happens that a general soreness, or tenderness, or even pain of the neighbouring parts, remains long after the greater pain has ceased; considerably distressing, and particularly to those whose entire system has become irritable from a long continued or a severe



disease. Here the utility of warm water or steam, as circumstances may dictate or allow, is considerable ; generally removing all these subsequent pains in a short time, and bringing on a general tranquillity of the system. Thus should I expect that this remedy alone would remove those slighter cases, or fits, which I have described in treating of these disorders formerly, in which no important nerve is acutely pained ; but in these I have, however, little experience, since a physician, especially, is generally deprived, in consequence of the present division of practice, of the power of studying, or prescribing for, diseases of a slight character.

I need not apply this reasoning to particular cases, such as headaches, sciatica, or what not ; as this would be to treat my readers like empirics, who must have a specific direction for every symptom of every disorder. He who understands the general theory of the disease, and of the remedies also, can never be at a loss ; and this, in truth, while it is the only real knowledge, is all that a writer can well attempt to inculcate. I may however go on to observe, as it may make more impression here, and as I did not dwell on it formerly, that the same practice, extending of course to the entire warm bath where that may be necessary, is valuable in all the intermittents with anomalous symptoms, though I need not

now enter into more minute particulars. And here also, I may point out or repeat the necessity of keeping warm and well clothed, the particular part affected with neuralgia; not merely as a relief to the pain when present, but to guard against that local impression of cold which not only aggravates it, but tends to bring on new attacks. On this subject I may further remark, as I suggested under ophthalmia, that while ice has been recommended for diminishing the pains of Neuralgia, I have invariably seen that its first effect was followed by a considerable aggravation of the pain, and that I consider cold, in this or in any other form to be decidedly injurious; though it is easy to understand how, like any other application producing a sudden and powerful impression, it might remove a fit.

Though I have already spoken of the use of narcotics, this is a more convenient place to point out one advantage to be derived from them; a fact which I purposely postponed, on account of its connection with the useful effects of hot water and steam. As a means of diminishing pain during the painful state, they are nearly useless, unless pushed to such an excess as to stupify the patient; in which case, it is probable, as I already insinuated, that their effects are injurious, while it is easy to comprehend how they ought to be so, by inducing, indirectly, that debility which

so prolongs and aggravates all the Neuralgiæ. But when the acute state is past, they become useful, as tending to remove that soreness which remains after the chief pain has ceased, and also by reducing the general irritation which has been excited by it. Thus also they sometimes act usefully, even as local applications, at least to sensible parts; and it is probably on this principle chiefly, that they are of advantage in the neuralgic inflammation of the eye.

This comprises all that I had to say respecting the useful remedies in Neuralgia; and I must now proceed to inquire of those practices which I consider to be injurious, as far at least as I have not already done so, and which, if I am right, it is most necessary to explain, that they may if possible be abolished and cease.

I do not know if any one still continues to recommend the division of the nerve in the Neuralgia (Tic) of the face; but if so, it is at least not very long since it has been abandoned. I have quoted this operation already, as a proof of the utter ignorance respecting the nature of this particular variety; as I have given proofs enough of the same ignorance respecting almost every variety of this disease at large. Surely, had it even been imagined that there was a resemblance between that particular neuralgia and sciatica, such a project would scarcely have been adopted

as a means of cure; as no man would have dreamed of curing sciatica by the division of the nerve, even had the peculiar nature of this nerve admitted of such an expedient without another obvious evil consequence. And while we must blame surgery rather than physic for this invention, the consequence of a habit not unnatural, acquired from familiarity with the knife, or with mechanical methods of cure, it would be somewhat difficult to explain upon what precise views a cure was expected from such an operation; unless perhaps, where, by removing the whole of the painful portion, it might have been imagined that the very disease itself was cut out and carried away.

But I formerly criticized perhaps even too strongly, what I trust is abandoned for ever; while also I need not say that the proposed remedy has failed, since the disease has very generally returned as before, after the separation of the nerve. That an additional evil, that, namely, of a partial palsy, should follow such an operation, was to be expected; adding aggravation to what it could not cure: yet perhaps it would be unjust to attribute such palsy, in all cases, to the operation, since I have already shown that it is a frequent effect of the disease itself. It was to be expected however, that the Neuralgia should sometimes be removed, at least for a time, by

such an operation ; as, even that toothach which is not accompanied or excited by a carious tooth is often thus removed by extraction ; the causes of which I have repeatedly explained. But it is also probable that, in these cases, the result would have been just the same had the operation been limited to a mere incision of the skin, and had the nerve been allowed to remain as before ; while no one will now I trust, again recommend even such an experiment as this, though we were not in possession of general and fundamental remedies, and further, even of local ones likely to be quite as effectual and much less grievous. As to those who have recommended such operations, I should be sorry to excite or renew their self-reproaches ; but it would have been a false tenderness to have avoided the subject, while there remains, as I know there does, even a hankering after this painful and useless remedy ; and, among some persons, a strong desire to prove that the principle, at least, was or is a correct one ; a feeling which might easily lead to a renewal of the practice.

With respect to the history of this practice, it seems to have originated with André, already named ; or at least I cannot trace it beyond him : while it cannot be denied that he may be proud of the influence of his name in the numbers of his followers, if that can afford any consolation

for the quantity of misery which he has produced, If his practice with the cautery has not equally spread, it is probably not so much the fault of the surgeons as of the patients, at least in our own country, to whom this expedient has, fortunately, always been one of insurmountable horror. In this the French surgeon and his followers appear to have had in view the eighty-fifth aphorism of Hippocrates, which, after enumerating the climax of remedies, in medicines, cutting, and burning, concludes by determining that if the last does not succeed there is no hope. Certainly, there has been no want of perseverance in the use of the knife, on the part of those with whom this is a favourite remedy for all and more than it can cure, and even in spite of almost perpetual failures ; but that it may be understood, once for all, how far such perseverance can reach, I shall only refer to a case described by Lizars, which, for many reasons, I must decline quoting.

Of general, not local, injurious practices or false remedies, it is the simplest evil, while it is a negative one, that they not merely tend to exclude what is useful, but, by suffering the disease to gain time upon us, serve to establish it and render it more difficult of cure. On that however I need not dwell ; but shall content myself with examining what, while it is common, is directly pernicious.

It must already be obvious that what I have here to say respecting all the Neuralgiæ or any Neuralgia, can be little else than a repetition of what I have urged on different occasions in treating of intermittents, particularly in their anomalous forms ; while as relates to the neuralgic ophthalmia in particular, I have also been compelled to make similar remarks when speaking of the means of cure. These observations relate to the evacuant and debilitating system in all its modes, including low diet and abstinence from wine, purging, chiefly by means of salts, and blood-letting, both general and local.

It is not however in the marked Neuralgia (Tic) of the face, (that almost only acknowledged mode of this leading disease,) that these remedies are likely to be abused ; as there is nothing here which can well lead even the most unobserving practitioner to confound it with inflammatory diseases, or with a "flow of blood to the head ;" while its own, separate, marking, name affords the usual empirical security against such abuses. And since, as far as this system is misapplied in neuralgic ophthalmia, I have already had occasion to point out the evils, I may here restrain myself to the few other cases where this abuse is likely to take place, or rather where it takes place every day.

I ought however to remark previously, as con-

cerning the whole, that the fashionable and frequent use of purgatives or systems of purgatives, and chiefly of salts and mineral waters, tends to aggravate all the Neuralgiæ, even to the Tic; causing them to recur or relapse, as it does the several forms of intermittent; and further, rendering them habitual, or incurable, by perpetuating that general debility and irritability of the nervous system, which is so fundamental a character in every disease whatever of this nature, local or general, that it must be intimately connected with the proximate cause; however impossible it yet is to explain the nature of that. And if such systems of purgatives are not absolutely prescribed by practitioners, directly, as remedies of common and obvious Neuralgiæ, they are so prescribed for numerous affections and symptoms dependent on these diseases or on their cause, but not suspected of such connections; while the almost universal fashion of self-empiricism adds a vast mass of the same pernicious practice, exclusive of the direct errors of physic itself. And thus, unwarily, are these disorders aggravated, perhaps even, to a certain degree produced; while the practitioner who may chance to be consulted, is himself unaware of the cause, not merely because he may be ignorant of the nature of the diseases, but, even should he be fully informed of that, because he is not made



acquainted with the nature or extent of the patient's own private practice against himself.

I have already made so many remarks on the abuse of blood-letting in the intermittent, and especially in its anomalous varieties, as well as on the utterly mistaken views under which it is adopted for diseases of the head of the character under review, under the false hypothesis of fullness of blood and flow of blood to the head, while I have also been similarly obliged to point out its pernicious activity in the production of paralytic disorders, that I could add little at present which would not be in some manner a repetition of what is past. Yet so important and so sweeping an error do I consider it, and so widely devastatory in its consequences, at present, being, as it is, a somewhat recently revived practice, (revived, that is, as a fashion,) while it is one also that seems to be increasing in vigour rapidly, not only in England but in France, that I scarcely know how to pass it by in silence; though I at the same time feel that I am not justified in speaking of it further than as it concerns my own subject, far less in entering on it to the extent that would be necessary, had I treated of it on general views as it relates to physic at large.

With respect to Parisian practice, including, as it dictates, the fashion, or gives the tone, to that of France in general, no one can be familiar

with it without witnessing the pernicious effects of this system ; while, renewed with a suddenness and an ardour, the causes of which it would not be very difficult to trace did I here dare to enlarge so far, it is a revival, and in the same vigour, of that literally Sangrado system which was the subject of well known satire to professed satirists whom I need not name, and of remarks, even more instructive, from persons of a very different class ; than which I could quote none more pointed than those of Madame de Sevigné. May I give a single case, in illustration, treated from the beginning to the end before my own eyes ? and I may venture, because it is a case strictly belonging to my own subject.

This unfortunate philosopher had been long subject to the usual dyspeptic and nervous symptoms of studious men, and was of a sallow and emaciated complexion ; appearing, in familiar language, to be far more in want of additional blood than of its abstraction, while his disorder was continuously aggravated by a system of low diet, adopted on the same mistaken views. Passing every day with him, in company with an English physician, it was easy to watch that over which we had no control ; as there would also have been no propriety in attempting to oppose “ the best advice in Paris.” Headach was, as usual, one of the occasional symptoms ;

and on one unfortunate day he was induced to send for his surgical friend, by whom he was immediately bled. The headach, on the following day, continued, or rather returned, as it had formerly done, but with increased confusion of thought; the pulse and all else indicating, to the English physicians in question, increase of general debility, and compelling us at length to offer advice, which was however opposed by the usual arguments. A second blood-letting of course took place; and the consequence was that he became, but only in the night, partially delirious; a result easily explained, in its very limitation. It was then determined in full consultation, that there was inflammation of the brain, to the exceeding surprise, not without remonstrances, of the two English physicians; and, consequently, with the addition of blisters, shaving the head, and ice, another blood-letting was ordered and practised. The delirium then increased, while the pulse became feeble enough, as might have been supposed, to have made any man reflect; but as this did not happen, or rather as the reflections took the opposite course, the practice was persevered in, and on the following day the patient died: leaving the physicians, doubtless, convinced, as usual, that he had not lost blood enough. Such is a French case; but it would be easy to give no small number of

parallels from English practice ; and should it make no impression at present, the day will come round again when its value as well as its nature will be understood.

• Did I dare to proceed, as to this practice in general and its present revived fashion, through all cases of its misapplication, I should far transcend my bounds, both as to space and subject ; while it offers matter, in itself, for almost a treatise. It would be not less curious and interesting to trace the causes of its recent revival in such power, and of its rapid progress as a fashion ; but from this also I must abstain. Yet a remark or two will not be irrelevant, even to the subject which is my own.

If I must not examine all the causes, inflammation has become a fashionable term of fear, scarcely less than fulness of blood, and determination, “ flow of blood to the head ;” while, to one or other of such imaginary causes, real enough however to cover a vast mass of imagination, it is sufficiently easy, with a proper quantity of inattention, ignorance, and confusion of thought, as of the indolence of some, and the hurry and want of time for thinking, of others, to refer to such causes more than half the diseases current in society. Thus the term inflammation having been but breathed or thought of, the imagination reverts instantly to bleeding;

blistering, and purging ; and the practice being as easy and obvious as the theory, there is no further occasion for study or reflection. The work of thinking is thus ready, the theory established before investigation ; and as the lancet is always at hand, easy of application, and carrying with it the appearance of activity, the consequences are obvious. It is an universal saving of thought ; and as a French provincial critic of this very day remarks, forgetting, perhaps, that Le Sage had made nearly the same observation before he was born, it is sufficient that any young gentleman has been six months at Paris, has acquired the term *Gastro Enteritis*, and the use of the lancet and the leeches, " to return into the provinces an accomplished physician, the aide-de-camp of sextons and undertakers." And thus it is also that, in Scotland, from the popular use of the term *Brain-fever*, and the natural confusion of thought thus produced as to inflammation of the brain, a similar practice is, in the country at least, almost universal, in the worst cases of remittent, or even of typhus, with symptoms of debility, not of inflammation : the delirium maintaining the error. Such is the dangerous nature of terms.

If any secular reader (presuming this essay may have such readers) should hesitate in believing that a science like physic and men like

physicians should be governed by fashions, should he treat the satire of Moliere and Le Sage and Sevigné as pure and groundless satire, he will find proofs of another kind in the history of the sect called Hemophilites in Italy about the year 1795 ; the period of a contest not less acrimonious than that of the Guelphs and Ghibellines, excited by means of two words, the invention of a man, a Scot, whose disreputable influence over the science by means so worthless, will not soon be forgotten. It was then computed that in various towns of Lombardy, in which the population reached from fifty to sixty thousand, the average people lost, each, from two to three pounds of blood per annum; this calculation having been verified by careful approximations : while for those, of course, who were so fortunate as to escape the physicians altogether, the others must necessarily have compensated by a heavier tax on their own arteries.

And if I have quoted some authorities against the practice of blood-letting in the disorders of this class, when treating of fevers, in the first volume, I may here add one of no small weight, then omitted, namely, that of Amati of Naples, who, very unceremoniously, pronounces it to be, *Death*. That it is the very frequent cause of death, even in our own country, while the disease obtains the blame which should fall on the

physician, every year's additional observation convinces me; and not one more than the summer (1827) which has intervened, between the printing of the first and second volumes of this work; a season perhaps even more noted than any of the immediately preceding mortal ones, for the ravages of Marsh fever under all its forms. Yet it is a season which, aided by the propagation of the present opinions on Malaria, through that essay which was the precursor of these volumes, has, I am pleased to see, made a formidable inroad on the vulgar opinions as to the common existence of Typhus, as it has justified those remarks on the whole of this subject which commenced in being ill enough received: at length seriously turning the attention of English practitioners to the entire subject of Marsh fever, and with the prospect of consequences that cannot fail to be beneficial to a wide extent.

But if, to say how fashions originate and are established and propagated, would require rather the pen of the moralist than the physician, there is one cause which, trifling as its powers might be esteemed on a superficial view, is far more active than superficial thinkers would imagine; while it is in truth the history of every fashion, springing often, as they do, out of the most contemptible accidents, or from the most contemptible, and often absurd individuals, and propagated

by that great sweeping principle of imitation or habit by which mankind is governed, sometimes even against common sense, as cattle obey some noisy gibberish of their driver. In this case, some professor in a fashionable school of physic, from personal opinions perhaps respecting his own constitution, or from the necessity of saying something different from his predecessor in the same chair (a necessity well understood) or from any other cause, commences by persuading himself, first, that wine is pernicious, or abstinence useful, or that he himself or some one else contains too much blood; while, accustomed to repeat this annually, he gradually increases in violence, learns to see all diseases through a false medium, and becomes the founder of a fashion; a fashion propagated and multiplied in a sort of geometrical ratio by the herd of his hearers, who, naturally and innocently enough, trusting to high authority, cease to think for themselves, or rather, never acquire that art; remaining, to the last, the sectaries of a system founded by their "magnus Apollo." But I have said as much as I dare to borrow space for, and as much indeed as is necessary, since far more would be equally useless: while I should think it, on the contrary, far too little, if, by writing, I could induce the sectaries of this fashion, as far as it is a fashion, to review their practice, and to restrain their



hands and their lancets to the cases, numerous enough, in which this is the real remedy ; cases where, perhaps, from habit, often from that of trifling with it, they too often fall as far short of the necessary activity and vigour in the use of this great and valuable remedy, as they misapply it in others.

But whatever may be the evils as to the diseases which belong to Neuralgia, that arise from general blood-letting, I suspect that they are much exceeded, arithmetically, or as to patients or cases, by those which flow from cupping ; a practice also which we must view as one of the fashions of the day, originating in the various false theories already pointed out. And as I took no notice, or an insufficient one, of this practice in my former remarks on the maltreatment of these disorders, it will be necessary to do so before I bid adieu to this subject.

It cannot be unknown to any one, that while the practice of cupping was formerly a branch of the barber's occupation, it has lately, almost recently, gained in dignity as in extent ; the number of those who profess it as a distinct trade having much increased, though at the same time the persons who conduct this art have not gained in point of intellect and attainments on their more multifarious predecessors ; while, consonant to the laws of political economy, the price of their

commodity has been materially enhanced, rendering them in fact the rivals of physicians themselves.

As a law in that science, a trade may be thought not to be established, or a commodity manufactured, till after the demand has arisen; while, in proportion to the demand, is the commodity, as are also its venders, multiplied. But if this be true, there is also such a thing as a forced market, or an artificial one; when the mere exposure of a fanciful commodity, or the knowledge that such a one exists, creates purchasers; leading to fanciful or artificial wants, before dormant or unfelt. This is precisely what has happened respecting cupping: it is talked of, and therefore it is wanted; there is a cupper in every street, and it becomes necessary to employ him.

Nor is this a caricature of the truth, even as it relates to practitioners in physic; to whom it has become a more ready and acceptable expedient than when the office fell on themselves, generally little able to perform it or to give up the requisite time to the operation; while, with regard to patients, self empirics or otherwise, it is a fact known to all, and to which, many will, I believe, plead guilty, or at least conscious. But it is necessary to inquire more particularly into

the economical details of this practice, as well as its medical application and consequences.

In those nervous affections which I formerly described, and in the more decided neuralgic headaches, there are many cases which, though still viewed under the false system of "fulness" and "flow of blood to the head" are not thought to justify general blood-letting, as there are many more where this expedient is not hazarded above once, or perhaps twice; possibly however oftener. Here, cupping becomes the substitute; since, of leeches, less in fashion in England, though peculiarly so in France, I need say nothing, inasmuch as the same reasoning applies to both, with some slight modification. In whichever mode this expedient has gained a footing, it continues to be resorted to on every return of the same symptoms; being similarly and equally abused in palsies, whenever the imagination of the patient or the practitioner can find a reason for it, and with the same ruinous consequences. Thus, in the neuralgic disorders, as in all the nervous affections from whatever cause, that aggravation in all its modes is at length produced, which I have so frequently pointed out as following the evacuating system: and the final destruction of the patient's health, often of the patient himself, becomes a consequence from

which it will require good fortune to escape; good fortune added also, often, to youth and resistance.

But whatever blame may fall on physic for the invention, or rather the misapplication, of this practice, though all the contemplated evils might have been produced by practitioners, they are not so in reality: since, in perhaps a large proportion of cases, the patient becomes his own physician. Economy, weariness, any other cause, operating with a prolonged and chronic case, induces the patient to pursue, from his own motion, that which has once been pointed out to him as the remedy for his disease; and thus the cupper, whose whole circle of knowledge is comprised within the circle of his glass, and whose interest it is to operate as often as possible, becomes the joint physician in the case. And thus do others, even without medical advice, labouring under sensations which themselves pronounce to be a "flow of blood to the head," and knowing that their neighbours have received such advice in similar cases, commence and pursue the same system of practice; while the operator, even were it not his interest, contemplating this one subject, and no other, through a whole life, becomes also the adviser or abettor: and, possibly, conscientiously enough, as far as his capacity for acquiring what is commonly called conscience ex-

tends, convinces himself that the blood of all mankind flows to the head, and that there is no salvation for human nature out of the precincts of the cupping-glass.

An unfortunate belief has much added to the extent of this persevering system of blind suicide; and that is, an opinion that it is a very innocent practice, that "it can do no harm if it does no good," and such other philosophy as is current with the vulgar intruders into physic. Hence it becomes almost an amusement; persons talk of going to be cupped as they might of dressing or shaving, or there is established a day for cupping, as, in the former times of physic, blood-letting was to be performed under the directions of the moon and the almanac. And how frequent this practice is, how frequent rather it has become, we may convince ourselves, even as spectators in general society, by the sight of marks as conspicuous as they are frequent in females, and especially in youthful ones; since we may look in vain for the same records of abuse in the grandmothers of all this youth and beauty. So much has the blood altered the directions of its flow, even since the days of our immediate ancestors.

But to pass from what, if it be satire, is rigid truth, while it is a satire of which I shall not repent if any good shall arise from it, let us see

what are the actual consequences of this practice, particularly when persisted in, or become habitual.

Physicians need not be told, that whether blood is abstracted in this mode, or by the lancet, periodically, or frequently, there is a tendency produced to replace or restore it, and that what was once under command, frequently becomes a dangerous necessity. Yet in cases where this practice is misapplied, that restoration does not remedy the evil effects, which go on progressively, though probably much more slowly than they would have done, were it not for this expedient which Nature has provided as a remedy for losses of blood. There is a gradual accumulation of the debility, the irritability, or the nervous diseases, be those what they may: while, in this progress, fresh symptoms appear, or the former ones are aggravated, so as to induce, still further, a temptation to the repetition of the remedy at first adopted under false views. And where the diseases in question are decided cases of the Neuralgia, under any form, all those effects take place which I have so often described; while each new application of the remedy, resorted to for fresh relief or fresh symptoms, tends to confirm and aggravate the disease, and, very generally, to induce new ones; even to those heavier consequences, epilepsy, palsy, fatuity, and mania, which I have already pointed out.

As on other occasions, I may here notice a case or two of this nature, with the hope of producing a stronger impression, at least on ordinary readers, than any general statements can be expected to do.

A middle-aged man, previously vigorous and healthy, to whom I had the access of a friend, was seized suddenly, and from exposure to Malaria, with the Neuralgia in a most regular periodical form, attended by much derangement of his general health, including what is called dyspepsia. Being opulent, he of course consulted the physicians and surgeons most in vogue; going the round of a tolerably wide circle. As the pain was not in the cheek, but on the back of the head, it was not perceived, or not admitted, to be Neuralgia; and as no one sought for the intermittent fever, it was agreed that this was a "break up of the constitution:" and dyspepsia, and nerves and bile, served to explain what was not a "flow of blood to the head," and a threatening of apoplexy, and of palsy, and what not.

Blood-letting was of course adopted, but without producing a cure: on the contrary, the patient became worse, and then cupping was resorted to, while at every cupping he became gradually worse: till at last the pain ceased suddenly, and the faculties became impaired, and there at length supervened epileptic fits. These results required

about six months of vigorous practice to produce, the patient being himself vigorous. Of course, the epileptic fits proved that there was congestion in the brain, or an abscess, or a tumour, or an ossification, or something else, and that the original (neuralgic) pain had been an inflammation in the pia mater, or in the dura mater, or elsewhere. Therefore the cupping was to be persevered in, and it was persevered in; and, at length, the epileptic fits began to occur many times in a day, and it was pronounced that death must follow. But the patient was not very easily caused to die: an accident compelled him to leave home, physicians, cuppers, and all; he found something else to do, became a little better, began to forget the necessity of cupping, recovered in spite of the abscess of the brain, and enjoyed his former health for many years.

Patients however are not always so fortunate in these cases. Almost at the same time, in the same place, his friend, a mutual friend, was attacked in the same manner, and put under the same treatment, in the same hands. This person had the disadvantage of being twenty years older, followed the same course, in the disease as in the remedies, became fatuous, and died:—whether of the cupping or not, the reader must judge for himself.

These are but specimens: I could fill pages with



parallel ones, under endless variations, but I need not; knowing well that they who have treated such cases and reasoned on them in the manner that I have condemned, will not yet learn to distinguish between the diseases which nature gives us and those which they produce themselves. It is fully as easy indeed to retort on my explanation, that it is wrong, as it was to proceed on the opposite views originally: as it must ever be where opinion, commonly called conviction, is made the test of right and the substitute for argument and proof. It is my own hope that I have produced both proof and argument, in all that has preceded; nor without such, should I, or indeed could I, have formed the opinions in question; since there was nothing to generate them but evidence, and since it was the difficult office of that evidence to change all the previous *conviction*, or opinions, that had been instilled into myself, in common with others, by authority, reading, and example.

Let me yet be permitted to make one general remark of the same critical nature, on a situation of things as to the popular health, which cannot fail to be known to the people at large as well as to physicians, if it has not led, in their minds, to the same conclusions. I cannot say that I have exactly witnessed the rise of it; but I have no hesitation whatever in saying that I have seen

its rapid increase, and that wherever I do trace it, it is in situations where fashion, habit, or what not, have rendered physic more of a necessary of life, or a luxury, than it is in other places; or in families, as families there are, which, from various causes, rely much on physic and physicians, or, from whatever reason, act as if life could not go on in its ordinary course without the aid of medicines.

The general fact in question is, that in such cases, we often find young persons, and chiefly, as might be anticipated, young females, always also, of course, in the opulent or easy classes of society, labouring under chronic disease, frequently during a long period of years, and to such an extent as to be disabled from all exertion; often, confined to their bedchambers, and, as might be expected, with minds as much subverted as their bodies are deranged. And while such persons are under the almost daily discipline of physic in some shape, we see nothing in their appearance, and find nothing in their descent or constitution, to justify such a state of things; while, further, no name can be given to a disorder, of which indeed we can scarcely define any one symptom in a satisfactory manner; unless the term nervous, or flow of blood to the head, or dyspepsia, or liver complaint, or some such con-

venient and fashionable phraseology should be resorted to in explanation.

Now, if we except consumption (and really there is little else to be excepted, while I need not say to physicians what those disorders may be), the nosology possesses no chronic disease which can thus occupy the youthful years of such unfortunate persons; since we can scarcely avoid smiling to hear of liver complaint, lasting for years, in a young person, in our climate; continuing in a young lady, perhaps with the complexion of alabaster, often even with a frequent if not a constant mixture of the ruddiness of health, from seventeen to thirty or more, and where not the slightest real evidence of a diseased liver can be produced. There are no diseases in the catalogue for such youth, such habits, and such constitutions, to justify such a state of things; but, nevertheless, there are not wanting causes enough for all that is obvious; for nervous affections, deranged digestion, with their trains of headaches, debility, mental feebleness, and much more.

And these causes will be found in the abuse of physic. We can trace it all to purgatives, to cupping, to blood-letting, to one or all of these; aided by confinement, restrictions, diet, and aided also by the aberrations of mind partly consequent on such treatment, and partly the result of moral

causes often sufficiently obvious. This is the disease of physic, though not always the produce of Physicians: abundant enough at all places and times, in the same situations, and from the same causes, if in minor degrees; the frequent jest of the satirists of all days, when slight, as it is the torment at once and the harvest of physic. And, as such, it may often, in reality, be matter of contempt; as it also is a business or an amusement, or the basis of a luxury, to those who have no other occupation. But, pursued to this excess, rendering the days of youth useless, destroying the mind with the body, and nursing up a morbid imagination with a disordered body to endure that length of life which it does not easily succeed in shortening, it is a fashion at which we can no longer smile, but which would, on the contrary, deserve the severest reprobation, if we could hope, by censure and exposure, to produce that reform which will take place ultimately, only in the same manner as the evil arose; from change of fashion.

And it would scarcely exceed the truth to say, that in any chronic complaint, in any person, and especially in any female under thirty, or even far beyond, if we except some rare cases of Hydrocephalus, it is impossible that cupping, or blood-letting, can ever be necessary, under the presumption of disease of the head, and very rare

that this can be required for any acute one ; that where it is practised it is generally injurious, and, if frequently adopted, highly so ; while when we perceive the visible testimonies of this practice in such persons, we may almost decide on two things ; first, that the practitioner has been ignorant, as well as culpably violent, and secondly that he himself is the sole cause of the ill health. To judge where he has been the cause of death itself under such proceedings, is not more difficult.

It were well indeed if not only ruined constitutions, but even death itself, were not the frequent, the almost daily result of physic thus misapplied in all the analogous and parallel cases, as also in some others : the produce of a combination of system, fashion, and ignorance, which renders Physicians and physic the just terror at present of all those who can see and distinguish. It is difficult to speak without high indignation as well as horror, of what we thus daily witness : to suppress the former is impossible, when our own, perhaps dearest friends, have thus been destroyed : and well now, perhaps, will he decide, who, like Napoleon, resolves to exclude this art and its professors entirely ; for, on the arithmetical average, he will assuredly be far on the side of security. It is but to open our eyes to see the truth of this every day ; while if it is over the ruined health, or the life, of females that we shall

most often have occasion to grieve, from the obvious reason that in them the nervous affections thus mistaken and maltreated, chiefly abound, or are chiefly brought before physicians, so has there been a rapid increase of the evil, from the numbers who, returning from a continental residence with the consequences of marsh fever which I have so often described, have been subjected to this, truly mortal as well as mistaken treatment. Nor do I overstate the facts, when, out of innumerable cases of a parallel or analogous nature which I might quote, I have seen dropsy produced by perseverance in violent blood-letting, in a healthy female of seventeen, of a peculiarly sound constitution: her sole disorder, as the event proved, being an intermittent headach, of little moment, following a common remittent fever; and this gross and almost mortal, not error, but systematic wrong, the produce of a late, unhappily celebrated, professor formerly alluded to, for whose aberrations of mind on this point, and for whose violence, there are thousands on thousands alive to lament, besides the thousands long past regret or suffering; since, in such a case as this, it is not to the mere personal wrong that the evil is confined. Such a system, promulgated by the authority of a Chair, necessarily propagates itself almost in a geometrical ratio; influencing to similar and widely spreading wrong,

the thousands who have no other guide but authority ; imitators, mimics, the slaves of opinions, and schools, and fashions, and teachers. If deeply have such Teachers especially to answer, deeply also has physic in general to repent of all this destruction : how those may feel who, hereafter perhaps discovering that they were wrong, may also bethink themselves that want of knowledge, proceeding from want of exertion and study, is no excuse for misconduct, still less that arrogance, or the pride of place or system, can never become him to whose charge are committed human life and happiness, it will be for them to answer when the time of reviewing the good and evil which they have done in the world shall arrive.

I must not however terminate these remarks, without making one observation on the subject of cupping, which applies equally to blood-letting, and which I reserved to this place. It is a remark of importance, as it tends to controvert, I hope to demolish, one argument in favour of this practice, and which, appearing to be founded on experience, is the most mischievous one with which the present views have to contend.

It is said, and indeed it is matter of daily experience, that in all such cases, immediate relief is procured by blood-letting in either of these forms ; and as the same relief is similarly pro-

duced in cases of decided inflammation, as in others in which it is an acknowledged remedy, the analogy seems sufficiently perfect to form a justifiable argument. Unfortunately, still more unfortunately, patients themselves become so convinced ; so conscious in fact of this relief, that they are always ready to demand it, and, still more, to resort to it without advice, or against that, on their own notions and opinions.

Physicians surely know full well that there are numerous cases of daily occurrence, in many diseases, even in inflammation, where though such immediate relief is procured, they refuse to adopt the remedy, from experience of its ultimate evil consequences. Such is the result in all the cases under review ; for, be the immediate relief what it may, the disease is ultimately aggravated ; whether or not we can clearly explain the source of that temporary abatement of disease, or rather, what is the real fact, the temporary abatement of suffering. If, in inflammation of the lungs, after a certain stage, there is scarcely an instance where such relief would not be obtained, while at the same time the physician knows full well the danger of seeking it in this manner, that also is, generally, true of fevers ; producing the same caution in the hands of judicious practitioners, but, among others, leading to the abuse of blood-



letting; to that abuse which has recently spread in so remarkable a manner.

At another extreme, if we take a case of decided nervous disease attended with the greatest possible feebleness, irritability, emaciation, with every thing, in fact, which proves, or at least did prove some years ago, to the satisfaction of all physic, a case requiring the exactly opposite mode of treatment, and if, in such a case, there is any local painful symptom, or any peculiar local inconvenience, the effect of blood-letting is a sudden relief to that symptom; and sometimes also, one, as sudden, but equally temporary, to the whole train of inconveniences. Here then is a temptation; but it is one which every judicious physician resists, or which at least was resisted, not very many years since, without hesitation; it being then well known that the radical disorder was thus increased.

The effect is precisely the same in even the purest Neuralgia; in the Tic; or the pain is removed at once by a sufficient blood-letting; while I hope that every one will now be agreed in believing, that this pain is not the result of inflammation, or even of an inflammatory tendency, in the system, and while, in reality, that remedy is scarcely ever adopted at present, notwithstanding the opinions of a few, and of no small reputa-

tion; formerly alluded to, who conceive such diseases, in certain cases at least, to be inflammations of the nerves. I do not pretend accurately to explain the cause of this relief; but can conceive it to arise from that diminished sensibility which is immediately produced by loss of blood; an effect which, when in excess, constitutes fainting: from a very obvious cause, the diminution of nervous energy.

Hence, if I am right, it is easy to see how, in every case of nervous disease and debility, with local symptoms, or with suffering of any kind, the same effects will follow, as they also do so often in fevers, and in exhausted inflammations; while it is further easy to understand how such relief will be most sudden and complete in those whose nervous system is in the greatest state of debility, exhaustion, irritability, or by whatever term we choose to suggest what we as yet know not how to define. And, in proportion to this previous debility of the nervous system, is the relief produced by inducing additional debility in this, sudden and effective; whence the very singular and well-known effects produced by even the most minute loss of blood in such cases. And this increases the temptation, to the injudicious, to those who do not reason; not only in the nervous and neuralgic cases under review, but even, as I before insinuated, in fevers and ex-

hausted inflammations; confirming them in a practice founded, as they believe, on that, most abused of terms, experience, but, in reality, on that mistaken experience which is truly the "experientia fallax" of physic, as it is the equally fallacious experience by which the mass of mankind, through all their relations, are misled. I might illustrate this view still further, by the effects of excessive blood-letting in hydrophobia, I think also in tetanus, and, assuredly in hysteria, where it has often been grossly abused: but I feel that it would lead me into a discussion which I have no right here to enter on; into one of those inquiries which have so often been forced on me from the necessity of illustrating the proper subject in hand, and which I have striven to quit at the moment they have begun to lead me from the main object, whatever important views they might open as to other departments of the practice of physic; as the present one assuredly does.

To proceed, while such relief is caused by a temporary and sudden diminution of the nervous energy, producing temporary insensibility as an immediate consequence, it is plain, that, if a diminished nervous energy, or a peculiar state of debility and irritability (since I must use these received terms for want of better) is either the cause of these diseases or at least an essential condition to their existence, the general, perhaps

slow, result, must be to augment that morbid condition, and thus to aggravate the disorder. And this general reasoning agrees precisely with the evidences that have been brought forward throughout the whole of this essay; in which it has been proved that the neuralgic diseases are dependent on, or connected with, such a state of the nervous system, and that all debilitating proceedings tend to aggravate them, and to render them more difficult of cure, or incurable. Thus do general reasonings, derived in different ways and through different analogies, coincide, with the observation on the real remedies and their effects, and also with the deductions drawn from the evil effects of erroneous remedies, to establish and to confirm, in a variety of modes, the truth of the views which I have held out through the whole of this essay, and respecting all the diseases united under its comprehensive plan.

On the subject of the cure of this disease, I have long hesitated whether I should add a remark, respecting the general truth of which I have not fully satisfied myself, and which I have at length with difficulty resolved to add before it is too late, and while this page is approaching to the press. Yet if eventually found to prove less just than I imagine it to be, it can, with this provision, lead to no erroneous conclusion, as it is incapable of doing harm. It is this; that while

Neuralgia is, always I believe, very generally it is certain, accompanied by an intermittent febrile condition, it is possible to cure the former, and very often, while the latter continues uncured. I *think* that I am certain of the fact, as to a great number of cases; of a certain proportion, I can have no doubt: but while I have, throughout this essay, been cautious of advancing any thing as truth, unless the evidence was uncontrovertible, from being sufficient and pure, I will not run the hazard of bringing discredit on the whole, by ranking with it what is less decidedly or generally proved. Others must inquire for themselves; while I think that various circumstances which I need not now recall to the reader, in the history of this disorder, render it probable that this can be the case, and that what is a symptom, and not the entire disease, can be detached, or cured, while the radical disorder remains; an occurrence, I need not say, to which physic, in many cases, presents sufficient analogies.

And the remark is an important one: because however the Neuralgia itself may be removed, the disorder cannot be considered cured while the febrile disposition remains; or it is necessary to extirpate the chronic intermittent also, lest, at any future time, under its influence, or protection, the painful disease should recur in this part, or possibly in some other one. And this fact

being ultimately proved true, or rather, a frequent truth, as I think it will be, we see an additional value derived from that theory which considers Neuralgia as a symptom or a mode of intermittent ; though even without this, there is no want of valuable practical results to be derived from that theory. It is also evident that if, under this case, I refer to the entire cure of the whole disease or disposition to intermittent, for ever, so this reasoning applies to the cases of single attacks or relapses ; since the fact, as I view it, is also this ; that in what may be a six weeks' relapse, for example, of the intermittent with the Neuralgia, this latter portion, the pain, may be removed within a few days, while the febrile state will run its full time if the medicines should then be abandoned. Such a cure therefore would be less perfect than we might, possibly, render it : so that the Neuralgia might return again even within this assumed period, or recur at a future time with the return of the chronic intermittent.

I have no more to add respecting the cure of Neuralgia ; while I regret that the necessity of dividing my subject in conformity to established opinions, and of combining a train of evidences and arguments, respecting almost every disorder here treated, with the description of these disorders and the modes of treatment, both correct and erroneous, should have led to a dis-

memberment and a repetition, which, should I ever be able to renew this essay, with the support of the medical profession instead of its expected dissent, I shall be, myself, the first to rectify, and to replace by a far different order and arrangement; an order which, if already arranged in my own mind, I must at present contemplate in hopeless silence.

## CHAPTER XIV.

### *Conjectures respecting the Condition of the Nerves and Nervous System in the Inter-mittent and Neuralgic Diseases.*

I CONSIDER the essay which I undertook, to be now finished ; as every essay of such a nature, resting on evidence, induction, and experience, ought to be completed when evidence is exhausted and induction carried as far as it can safely go ; and when, from both, confirmed by experience, a method of cure, as far as one has been ascertained, has been laid down. Yet, if there could be discovered or proved a proximate cause, an investigation of that subject would not only be essential to such an essay, but would be productive of decided advantages, by uniting, under one leading principle, phenomena, diseases, which, notwithstanding the several analogies by which they have been connected, still present too many differences, while they want that great link which is indispensable in every philosophical view of phenomena.

This however I have already disclaimed ; since, unable to form ideas on this subject, I will not follow the too common practice in physic, of



deceiving the reader with empty words. Our ignorance of the nervous system, in its whole, in its details, in every thing but its visible distribution, is radical and complete : it is entire, absolute ignorance, in spite even of recent attempts to elucidate it, and of a few scattered facts of small value ; and till all shall be done, in a pursuit where there is scarcely even a commencement, it will probably be vain to attempt the explanations desired ; while, of that, we can at present see no prospect, scarcely even conjecture by what road we are to make the attempt.

Still, I may venture to make a few remarks on circumstances connected with these diseases and with the condition of the nerves in them, for which no convenient opportunity has offered before ; and I am indeed bound to this by the promise made in the chapter on anomalous intermittents : while, had such opportunity happened sooner, these observations would scarcely have been intelligible till all the facts with which they must be connected had been detailed. It is a task nevertheless that I would have avoided, had I dared ; sensible that it must be unsatisfactory, and that even had I any peculiar ingenuity to exert upon it, the best result may prove, perhaps some approbation from the youthful practitioner who sees all physic as we perhaps all saw it in the days of our debating societies, and the silent

doubts of the rational and philosophical physician.

Though what I have to remark is but brief, and as far as appears to myself, of very little real importance, I cannot even say that little, without observing on one difficulty, singularly irrelevant, in reality, but not the less vexatious, which *in limine*, tends to obstruct or encumber all inquiries into the pathology of the nerves or of nervous diseases. It is founded on the abuse of a term long popular, and on a perverted view, in the public mind, of the meaning of the terms nervous, and nerves, as applied to disease or to health. Nor is physic itself here innocent; since, while it may in a great measure be accused of being the founder of this perverted acceptance, the opinions of the value and meaning of these words are little different in the minds of the mass of practitioners from what they are in those of the public at large.

It is almost superfluous to say what the popular, or, in reality, the only existing meaning of these terms is, in the minds of both parties; while it may be considered a singular instance of the power of terms, and of the habit of thinking vaguely, or of not thinking at all, of using words without meaning, or under false meanings, that even anatomists, physiologists, physicians, often seem to forget what they know or knew; forget

what the nerves are, and what offices they really perform in the body, and follow the herd of the ignorant and thoughtless, not only in this lax manner of speaking, but of thinking, if thinking it can be called. If, by the multitude, too generally by both multitudes, the nerves are spoken of, even in more serious views of disease, as a kind of metaphysical entities, or rather non-entities, it is as if they were air, spirit, an idea without prototype, nothing; while the word nervous, as applied to disease, is equally understood to mean something unappreciable by human investigation; the misfortune of a feeble body or a feeble mind; a term to be applied only to weak women or more cowardly men, a property of the valetudinary or the hypochondriacal, a "permission of the will," an imagination. To possess weak nerves, or bad nerves, or, reversely, to be without nerves at all, such language and more is not purely phraseology, but is, in reality, an abstract of the popular philosophy on this subject; and the philosophy of physic in general is, here, far too much like that of the people. They may not indeed know it, but anatomy cannot easily forget that the nervous system forms a bulky, weighty, portion of the body, capable of being dissected and traced, equalling in extent, in intricacy, in distribution, the more favoured circulating system, though not yielding blood to a

sabre-cut or a lancet, and therefore somewhat less vulgarly obvious. Nor can physiology and physic well forget their offices: forget that it is not the circulating system, that system which has almost drawn all favour and attention to itself, even in their minds, (as, to the vulgar, it bleeds, and bleeds the man to death,) but the nervous system which is the prime mover; the cause even of all circulation, of all motion, of life itself; that it is *The Life*: that the *Nerves* are *The Man*, the *Animal*: and that every thing else, the whole animal structure, in all its parts, is a mere machine and a chemical laboratory, as purely subservient to the nervous system, as is a steam-engine to the intelligence of man. Without a nervous system, there is no animal; there can be none: without a circulating one, there are myriads.

The "nerves," are, in truth, the very animal itself; and yet while the vulgar, pardonably enough, forget this or know it not, physic abets, and has abetted them from its earliest infancy: searching all the remainder of the body, every subordinate, for diseases and their causes, yet scarcely casting a retrospect to that which is the basis and fountain of all disease, as of all health; except perhaps, occasionally, as under the banner of Hoffmann, to produce some fanciful and sectarian theory of spasm, and, even then, recurring to its favourite circulating sys-

tem, while forgetting the prime mover: just as if he who would correct the faults or study the motions of a clock, should agree with himself to omit the pendulum or the weight.

If the nerves must thus be the prime seat of all disease, and the animal structure, its mechanism apart, is a chemical laboratory, yet, trifling as chemistry trifled in its early days, this was forgotten, and has hardly yet been understood, except by the few, I scarcely know whom to name, who are chemists in a very different sense from the popular and received one; chemists in even somewhat more than iodine and potash and equivalents. And when I say this, I do not forget that there has been what was called a humoral pathology; since I surely will not insult chemistry by ranking such empty speculation as this produced, under so respected a term: and as little think it needful to examine that system which sought for the causes of disease, or for disease, in the philosophy of mechanics, in the solution of insolvable hydraulic problems, or in a system of dynamics attempting to operate without the very elements of calculation, and not only thus, but forgetting the very moving force, the nervous system, neglected by the humoral and mechanical philosophy alike. And it is the immediate, the prime, the chief office of this system to maintain in action, the chemistry

of this structure; since, without that chemistry, the mechanism of the animal falls to pieces and disappears; ceasing to act long before that ultimate event. Where then should disease be sought? chemical laws are invariable: chemical actions must proceed by those rules which have been imposed on matter, and through the agents, yet unappreciable, which govern them. These actions, subordinate, consequential, as they are, cannot cease, alter, vary, or go wrong of themselves: they must follow as they are ruled or directed, as much as must the operations of chemistry follow the master hand of him, the Berzelius, who directs them. They follow, they do not lead; they maintain the visibly acting machine, as it is formed through chemical affinity and disposed by mechanical laws: but they maintain it under the immediate direction of the nervous system, the agent of Life; as, by that power which first disposed the whole, they were placed in immediate subordination to it. And even when chemical and foreign agents interfere with the usual chemical actions of this laboratory, it is on and through this system that they must and do act. They derange it; and it causes, or suffers, the chemical actions which it used to regulate to right, to go wrong. Thus it produces disease, even when we assume from partial evidence, that the seat and pure cause of such dis-

ease is elsewhere, in the machine, or in the laboratory, while thus, much more, does it produce that in other cases. The Directing Power or force is deranged or disturbed; the chemical actions are deranged; the machine is deranged. This is the train; and invert it as we may, by commencing from either secondary consequence, still we must revert to the prime mover, and recommence the train in its due order, or view the nervous system as the fundamental seat of disease; the cause of wrong actions in its subordinates.

Let those who can and will meditate on this subject, consider it: I dare not here go deeper into that which is a question for physiology at large. But let him who will thus meditate on this, and will also ask himself what he has hitherto considered the animal living machine to be, learn to think of chemistry also far otherwise than he has ever yet done; far otherwise than as Physic knows that science or thinks of it: while I shall not assert what is not true, when I say that whatever the ostensible fact or the belief may be, this does not form a real branch of medical education: being not merely unknown or neglected as a philosophical science, as The Great Science, but unknown by the great body of medical practitioners, I might almost say, by the general body, even in its most ordinary and almost

empirical details. Had it been otherwise at present, had it ever been otherwise since the very commencement of physic, we might not indeed have been now really acquainted with physiology, but we should at least have avoided the endless chaos of clumsy hypothesis and wordy nonsense with which physic has overwhelmed the world.

And let him who thinks of chemistry, contemplate it as the science of that power by which, not only the animal machine is formed, and preserved, and acts, but of that power which formed the very world itself, which preserves, as it formed, all that the universe contains, animate and inanimate, which is the cause of all action, the agent and first mover—under that Higher Power which directs the Universe—of every action, every motion, every change, every destruction and every renewal, which take place on and in the globe which we inhabit. This is chemistry: it is the Great Secondary cause, the right hand of The Divinity on Earth, the unseen agent by which His laws or ordinances are carried into execution, and, to our apprehension, appearing to partake of a spiritual essence, to be the immediate emanation of the Soul of the Universe, of the Deity. And thus is the animal machine under its laws; while these are here directed by that ulterior structure, the nervous sys-



tem, to which the Deity has attached the principle of Life, and through which the Soul of man is enabled to act on matter and to be affected by it.

We are ignorant indeed how the nerves are constructed, and how they act in performing their almost miraculous offices; we therefore shut our eyes to them, as if to avoid our own reproaches: we do not know consequently in what way they can be diseased; and, not knowing this, not knowing how to examine their pathology, any more than their physiology, by dissection, nor how to reason respecting it from physiological principles and analogies, physic seems almost to have agreed in believing that they were not subject to disease or derangement, of their own, independently; and to have contented itself with labouring at what was least apparently difficult; wasting its centuries in making just the progress that might have been expected from such a mode of investigation.

This cannot be the right road: yet if we are still ignorant of the structure of the nerves, and of the mode in which they execute their functions, it surely has at least been demonstrated that they are subject to diseases purely their own; derangement of structure or of function; derangement in some mode, productive of peculiar symptoms and peculiar diseases. This is what

the subjects of the preceding essay have demonstrated, almost as nearly as any thing is demonstrated in physic; though, still, the pathological condition, the proximate cause, is inaccessible. Neuralgia at least demonstrates, if intermittent does not so perfectly, that the nerves, or a nerve, can be deranged, and can produce a peculiar disease; and that this disease is as far independent of the rest of the body, and of the circulating and glandular system, or of the obviously chemical department of the animal structure, as aught can be in a structure so complicated and mutually dependent; while, when that appears to be engaged, it is engaged as a collateral effect, not as a cause, though, as an effect, capable, probably, of becoming a cause of the second order in the production of further diseases.

Thus, must I view Neuralgia at least, and probably intermittent also, as a disease of the nerves or of the nervous system: and in spite of the popular and false meaning of those terms, thus must I continue to speak of them as far as I have any remarks to offer; while still convinced that whatever I say will not produce the effect which I desire, against the weight and influence of those perverted terms; and that, moreover, and as an accessory consequence, in the popular feeling, the more completely I may succeed in proving intermittent and neuralgic dis-

eases to be nervous, so much the more certainly will contempt be thrown on them and on those who labour under their visitations.

Let it now be admitted that the nerves themselves can be diseased, originally, in their own structure and functions, and we may then examine, if still very partially, how these several diseases are produced and related. Did we know what that derangement was, we should be possessed of the proximate cause, and the whole task might be easily completed. They who are satisfied with hypothesis would be at no loss in contriving a term, or might perhaps borrow spasm or inflammation, since these form the great "open sesames" of all physic: an algebraist would substitute the unknown quantity  $x$ , and reason on it as far as his materials would lead him; and this is the rational and philosophical mode.

Yet the materials themselves are very limited; I must make the best use of them that I can. And to avoid circumlocutions, since either I must do this, or coin new terms, or adopt old ones, misleading certainly by means of the last, and probably producing confusion and error by either expedient, let me be permitted, like the algebraist, to take  $x$  as the condition of the nervous system in intermittent, and  $y$  as the local affection of a nerve in Neuralgia; to which I

shall also have occasion to add  $z$ , as representing the equally unknown condition which produces palsy; and hereafter also, as I conceive unavoidable,  $w$ , as the symbol of that inflammation, connected with Neuralgia and intermittent, which must differ from phlegmasia or common inflammation, and which I trust I have already proved to be essentially different in pathological character, however similar to the senses. The reason for adopting such a symbol here, is perhaps even more important; as I hope soon to show.

This is not a piece of algebraic affectation; since it is impossible to reason without a symbol of some kind, and we cannot apply terms expressive of ideas, before we are possessed of the ideas themselves. When the value of  $x$ ,  $y$ , and  $z$ , and of  $w$  also, though a remoter condition, or more properly an effect than a cause, shall hereafter be discovered by physiologists, it will be easy to give a better form to these remarks, and to do much more as to the whole of this subject than I can at present even conjecture.

To take the simplest Neuralgia, and it may be that of the face; the Tic. In this, a certain portion of a nerve is in that condition which is here termed  $y$ , and which is ascertained to be brought on by Malaria acting on the body, or by the local application of cold, apparently, or lastly and more rarely, by injuries, even by those of a distant por-

tion of the same nerve. That the disease belongs to the body of the nerve itself, seems proved by this latter fact, as it is, further, by the symptoms themselves; since the effects do not necessarily extend beyond it. And the obvious consequences, or sensible effects, are, in the purer cases, pain, simply, in what must be supposed the especially diseased part; regulated, very mysteriously, in its returns, by a period of twelve hours, or by its multiples or submultiples, while there is an interval without obvious disease.

It is probable however that the condition *y*, is a permanent one, however subject to intervals of ease, among paroxysms producing pain: a conclusion derived from the fact of the regular return of the pain to that exact part, even through the years of a long life, and confirmed, in some cases, by tangible disorganization. But here are we stopped; or we have not yet discovered what is the pathological condition to which the term *y* is annexed. The dissections that have been made have thrown no real light on it, if we except that thickening of the coat or connecting medium of the proper nervous fibres which produces the tumour described in a former account of the disease; while we cannot suppose the proper disorder to lie in that which appears to be merely an appendage to the sensible part.

And as far as dissections can deserve credit,

these deserve it ; since they have been performed by the most able anatomists, among whom I need only name Bichat and Charles Bell ; while, that they have thrown no light on the subject, is testified by the reporters themselves. The former, in a tumour of this nature, found varicose veins leading into the sciatic nerve ; the latter, and many besides him, nothing but that coagulated lymph or almost inorganic matter which belongs, as a diseased state, to the interstitial membrane ; the best marked swellings having the same appearance which occurs in the ends of nerves that have suffered in amputation.

This condition of the nerve under Neuralgia has been called a state of inflammation ; but while that is a favourite term, applied to solve far more than it can explain, we cannot understand an inflammation, or a phlegmasia, alternately active and dormant, and through such a length of time ; and can with difficulty believe that to be a state of true inflammation, at any time, which is not relieved by local or general blood-letting, which, on the contrary, is aggravated by those proceedings, and which, when it is cured, is removed by a system of remedies admitted to be injurious in inflammation.

If however there is a real inflammation present at times, or in certain cases, as indeed cannot fail to be the fact from the production of this

effused and coagulated lymph, we can easily explain that on the principles formerly brought forward. In various modes of the disease, there is inflammatory action or absolute inflammation produced, as a secondary effect, in the adjoining parts, as, very notably, in the toothach and the ophthalmia: and while it is easy to understand how this should also happen in the membranes which include the nerve, it becomes more obvious than before, that this is but an accessory effect, and not the disease itself; and that they, consequently, who have considered and treated Neuralgia, in any case, as the inflammation of a nerve, have committed a radical, if an easy error. And this inflammation, it is plain, may be permanent, just as the ophthalmia or the rheumatism of the face is, while the condition of the nerve giving rise to it is periodical and transitory. Admitting, consequently, that the nerve is inflamed in Neuralgia, there is a cause beyond that, or a prior morbid state, which is the cause or condition *y*, sought.

Let us now inquire what happens in cases less simple; while it is indeed uncertain whether, except in the instance of local injury, there is such an abstract case as that which I have, for the sake of simplicity, stated; or whether the local condition *y* is not almost necessarily connected with a general disease of the nervous

system, here to be distinguished, for want of knowing its nature, by the symbol  $x$ .

The condition  $y$  being present, it is attended by a febrile state, generally paroxysmal, accompanying the painful stage of  $y$ , ceasing similarly, and similarly regulated in its returns by the period of twelve hours or its multiples. This is intermittent fever; the symbol  $x$  representing the unknown state of the nervous system in this disorder. How far that state extends, primarily, through this system, we cannot certainly know; but that the brain itself is in that condition, is proved by all the phenomena of these diseases; while the general system of the nerves beyond that, (always excepting the one in the condition  $y$ ) may be affected inasmuch as they are so, only through the influence of the brain.

Practically then, in Neuralgia, we must consider the condition to be, generally,  $x+y$ ; or there is a permanent disease present in the nervous system or in the Brain, subject to alternate activity and rest, or of action and inaction, as far as our senses can discover, united to a similarly intermitting but permanent disease in an individual nerve. It appears therefore that while the condition  $x$  may, and very often does, exist without  $y$ , the latter cannot so well exist without the former; or the general state producing intermittent fever may or may not be united to the local one pro-



ducing Neuralgia, while it is less common, reversely, to find  $y$  unconnected with  $x$ , or Neuralgia independent of intermittent.

I am far from deciding, however, how this fact absolutely stands: though, if I have not seen such a state of things, I can conceive a periodical Neuralgia existing without an accompanying periodical fever. I mean here, of course, on the supposition that the disease has been produced by general causes acting on the system, and not by local injury. In this latter case, we can at least easily suppose that  $y$  exists alone, whether this shall prove the fact or not. But it is a point that I cannot determine, for want of sufficient experience, or for want of facts, and which must be left for future examination: while, in the mean time, it is rather indifferent as to the present investigation, how it shall be finally determined.

Further, while the same cause produces both  $x$  and  $y$ , or  $x + y$ , there are other connections between these two conditions, to be considered, respectively, general and local, which deserve a briefer analysis under this formula than I could bestow on them in the former and descriptive portion of this essay. The active state of the condition  $x$  is found to alternate with that of  $x + y$ , under the usual law of twelve and its multiples: or the condition  $x$ , after some duration, is con-

verted into  $x + y$ , or, reversely,  $x + y$  is converted into  $x$ , or the two alternate, by relapses or periods, in various modes: while further,  $y$  appears sometimes to become the substitute of  $x$  to a considerable extent, or perhaps entirely; or, as the local disease gains in intensity, the general one diminishes, or else the latter may be exchanged for the former.

And in any case of the problem, or equation,  $x + y$  producing Neuralgia,  $x$  may be a variable quantity while  $y$  is a constant one; or it is an exhaustible term in this equation. In strictness therefore, under this symbolical form, a different mode of algebraic expression would have been necessary: but while this would really give an air of affectation to the whole, it must be remembered that such formulæ are not intelligible to those who will find no difficulty in following this reasoning under a simpler mode of expression. And it is sufficient that the reader has, once for all, been reminded of it.

All these circumstances argue, if not a similarity, a strong analogy or intimate connection between the two conditions  $x$ ,  $y$ , or between the general disease of the brain and the local one of the nerve; while that similarity is strengthened by the fact, that the same remote or original causes produce both diseases, and that both are cured by the same remedies, and aggravated by

the same maltreatment. To use a common lax phrase in physic, we might conceive that while  $x$ , or the proximate cause of Intermittent fever, was a general disease of the nervous system,  $x + y$  was the same disease with a local determination: as we might further suppose that where  $y$  is present, and  $x$  not assignable, the case was in the same order of analogy as that of a local phlegmasia produced by unassignable inflammatory diathesis; to use the same current phraseology.

From these considerations we might conclude; notwithstanding our ignorance of the proximate cause, or of the values of  $x$  and  $y$ , that the Intermittent fever was a disease of the Nervous system, or of the Brain, essentially, and that whatever symptoms, collateral or essential, occurred in it, were secondary effects, as were all the anomalous diseases which I have pointed out under this general head. And therefore also, that as far as the circulating system was affected, all its affections were of a secondary nature; a conclusion of great importance as to the practice, since the original cause  $x$  ought here to be the chief object of our attention. And as, from the symptoms, from the nature of the useful remedies and the effects of the injurious ones, as well as from the nature of these last, the state  $x$  appears to be connected with all those symptoms or consequences which mark what is esteemed debility in

the system, while there are other inflammatory conditions or diseases, which indicate, in all the same modes, a state exactly the reverse, the distinction in question becomes most important; while it points out, in a general way, the reason, or rather confirms the reality, of what has long been admitted from practical observation; the existence of two inflammations at least, of extremely opposed characters.

I must now pursue the connection between  $x$  and  $y$  further, so as to examine into this particular consequence, Inflammation; the inflammation of Intermittent and Neuralgia. The general facts relating to it have preceded, as have the proofs: but while the distinction between what I here represent by the symbol  $w$ , and inflammation in its ordinary sense, is most important in practice, so is it necessary that the general reasoning should be brought together in that narrow manner which was not formerly practicable. Yet it will be remembered that  $w$  stands, or may stand, in somewhat a different relation to  $x$  than does  $y$ ; since if it is a dependence of  $x$ , directly, so is it a dependence of  $y$ , even in those cases where  $y$  might be conceived to follow  $x$ , as well as where it may be imagined primary; being therefore, if this be the fact, at times the third effect, or the effect of an effect. And I may here take  $y$  simply as the symbol, instead of  $x+y$ , that being no

further necessary : and, since the former is an unequal or varying quantity or force, becoming evanescent, as I just remarked, while the other remains, the compound symbol, thus simply stated to prevent the necessity of adopting a much less generally intelligible algebraical expression, might tend to mislead.

The condition *y*, therefore, possesses the power of inducing, apparently through the minuter ramifications of the affected nerve, an excited circulation, or an inflammatory tendency, in the neighbouring vessels, with increase of sensibility; and this, in some instances, proceeds to a species of apparently active and permanent inflammation. Or, let it be supposed that it is the condition *x* which produces this local effect, as it produces *y*, the conclusions to follow will not vary essentially.

In the condition *x*, or, intermittent fever being present, we find that while any one principal nerve may suffer the state *y*, so do there arise diseases without pungent or proper neuralgic pain; being among the anomalous symptoms or cases of intermittent which I have described as far as I am acquainted with them. Now the reason for supposing that these depend on the condition *y* in the nerves supplying these parts, will be immediately given; and if they be admitted, then we must, theoretically, look on all these as secondary diseases or symptoms of in-

termittent. Or otherwise, if they depend on  $x$ , as  $y$  does, being either conditions or modes of  $y$ , or else are thus produced through the intervention of  $y$ , so, further, the condition  $y$  being probably at times, sole, or independent of  $x$ , may they be modes of  $y$  in the same independence, or else effects of that state as existing in an independent manner, the produce of the exciting cause. Or, in terms, the inflammation in question, here called  $w$ , may depend on pure inter-mittent alone, or on neuralgic inter-mittent, or on pure Neuralgia; the intermediate case being that already alluded to where  $w$  may be a third concatenated effect.

And in these cases, the diseases which are consequential, or the effects, will vary according to the nature and offices of the affected parts: so that  $w$  being the fundamental effect, or the peculiar inflammation, there may be produced pleurisy, rheumatism, gastritis, ophthalmia, or whatever else; simulating, in certain cases, the disorders of the same visible aspect or general symptoms which arise from another, and apparently very opposed cause. Such is a theoretical and abstract view of a generic disease: and if it is the general expression of what has preceded on this particular subject, it is confirmed by the various facts found in the preceding description of these disorders, on which it has been founded,

or from which it is generalized. To proceed to the promised illustrations and reasons.

If the sciatic nerve be the seat of *y*, the pain is highly marked, as it is when any other principal nerve is similarly affected. In the lumbago of the same character, the disease being apparently seated in the smaller ramifications of the cauda equina, the pain is more general and less acute; and it is still more mild and more diffused in hemi-crania, in the similar affections of the rectum and bladder, and in the rheumatic pain of the face without fixed inflammation. There is a gradation therefore in the quality of the pain, proportioned to the sizes, and numbers also, of the nerves affected *y*; and that, in these cases, this is the affection, is proved by the same facts which prove it in the simplest Neuralgia with which I commenced this examination.

This is the first gradation; while in it I might perhaps have included the palpitation of the heart; an affection of its motive nerves, incapable of producing pain, inasmuch probably as that organ possesses few or no nerves of mere sensation, and exerting itself in another manner.

This is the basis, or the first step, in the chain of the argument. The smaller nerves may be excited to action, or may be, in whatever manner, in the state *y*: and that state does not produce proper neuralgic pain, either because it is

moderate in degree, or because the affected branches may be minute; while, when existing, it is diffused, as occupying many nerves instead of one point.

The second step is no less plain, and no less proved. The nerves, thus in the state *y*, may be the secretory nerves of glandular vessels. The consequence which would be inferred does occur. It is a state, in these vessels, of activity; and the result is increase of secretion. It may be thus, simply: it may be attended with pain; and that pain may either be neuralgic, or it may be the pain of temporary, and modified, or imperfect inflammation: of an action in the secretory arteries, greater in degree, or, possibly, of an analogous action in non-secreting arteries. Here then is *y*, not properly painful, or seldom so, but exciting undue action in the minute vessels.

The next or third stage, bringing us a degree nearer to simple inflammation, is that state of increased sensibility, proceeding gradually to turgescence or enlargement, and to redness, which happens in a fit of common Neuralgia: the *y* of the nerve here producing, probably through its influence on the minuter branches, and by means of them on the minute arteries, an increase of action tending towards inflammation, but which ceases with the cessation of the active state of *y*.



The fourth step occurs, demonstrably, in rheumatic affections of the face or other parts, with Neuralgia or intermittent; with either  $x$ , or  $y$ , or  $x+y$ , and in cases where the disorder is transitory or periodical. The condition of action in the minute vessels has increased: there is impending inflammation, or an approximation to it:  $x$  or  $y$  are about to produce  $w$ . Or there is an actual  $w$ , which ceases with the action of that mysterious cause, in  $x$  or  $y$ , by which they are under the periodical law of twelve hours. In the external parts, those inflammations  $w$  are visible and indisputable: they are inferred of the internal ones, in sundry cases to which I have formerly referred. When  $y$  is present, alone, or otherwise, the dependence is proved by their co-existence; as it is inferred that  $w$  is the dependent, from what has preceded. When  $x$  alone is present, it is inferred to be the cause, from the similarly periodical and consequential nature of the  $w$ , and from the effects of remedies, for good and evil.

The last stage is the point to be proved. The inflammation is perfect: but it is a perfect  $w$ , as in the ophthalmia of  $y$  and  $x$ . In this particular case, it is visible and indisputable: it must be, and can be, inferred from symptoms, when it is not to be seen from the invisibility of its place; as it is also from dissection. And it is still  $w$ : because, if it

were not, at what point does the character change to the reverse one? because, even then, its *y* will accompany, in regulated periods or otherwise; as will its *x*, or both: because, even then, it is subjected to periods during one portion of its progress, while permanent, or irregular, in another; because, the same remedies, for good and evil, continue to produce the same effects as they did in every link of this chain from the purest *y* or *x* to the most inveterate and decided *w*. And if all this is the same when the inflammation is not visible, as it is in the ophthalmia *y* and *x*, but must be inferred from symptoms, then is it a just inference that all such inflammation is *w*, depending on *x* or on *y*; while the dependences on *x* are the inflammations of Marsh fever, so much misapprehended, but, still, through experience, better treated than they are understood.

Thus have I traced an argument, to which I cannot see an answer; drawing the connection as close as it can, now at least, be drawn, between intermittent or Neuralgia, and inflammation. It is an analysis of the principal facts as well as arguments which have been already used in different parts of this essay, for establishing this important point; namely, the true nature of this particular inflammation. And as far as relates to *x*, it is the basis of the theory of anomalous and simulating fevers of an inflammatory charac-

ter, every one of these being a *w* of some particular part; as the other, the nervous disorders, with similar connection or dependence, will find their analyses, as far as those are now attainable, under *y* and *z*.

True, it is deficient, inasmuch as we do not know what the condition *w*, physiologically, or pathologically is; or the real proximate cause of this particular inflammation. But it is only deficient as are *x*, *y*, and *z*: a deficiency which does not destroy its utility. Nor is it further deficient than is the theory of the reverse inflammation, or of true phlegmasia. In this, as in the other, all that we can see is an effect, not a cause; enlargement of the minute vessels, or, if this term is more pleasing, increase of action. This is but an effect; yet physic goes on forgetting that when it calls the proximate cause of inflammation increase of action, it is but substituting one term for another, and that term the name of an effect, not of a cause. Increase of action is inflammation, and inflammation is increase of action; yet thus does physic write—not reason—through volumes in thousands, and flatters itself that it is making progress in philosophy. That two, opposed, conditions, or causes, will produce increase of action in the minute vessels, and that this action is inflammation, has been proved: but, to precede and immediately pro-

duce that, there must be some immediately previous cause in those vessels, and intermediate between that effect and the remoter cause which lies in the nervous system. This is the real proximate cause, and this it is which is unknown in both inflammations; while, in each, it must be different. We have not discovered its nature, it is true; but there is a step made at least, when it has been shown that there is such a state yet to be investigated, and when the attention has been directed to the right point, and to facts instead of words.

Inasmuch as there may be more leading causes than two, of this effect, inflammation, and, consequently, more than two properly proximate ones, it was not my business to enter on that question, and I have gladly avoided it that I might not encumber further the present argument.

I have perhaps stated all this too briefly and too abstractedly. It will probably be a cause of greater hesitation than any thing which I have attempted thus generally to deduce; and particularly because of the practical questions which it involves, and because of the extreme difficulty of overcoming the habits of thinking implicated in the term inflammation. Let me attempt to illustrate it further, since there cannot well be a more important question; from the deep share

which it takes in the most difficult portions of this entire essay, and especially in the most intricate varieties of marsh fever. It involves the entire question of the difficult cases of remittent fever attended by inflammatory affections, and of the intermittents of similar character. It involves also the inflammatory varieties of simulating and deceptive marsh fever, whether acute or chronic; those cases, perhaps the most important of all, from their peculiarly deceptive character, where the fever or the  $x$  is little, and the inflammation, or the  $w$ , is chief, or all. Thus does it also involve the neuralgic inflammations, such as the ophthalmia, when the Neuralgia is overlooked still more; where it is either unapparent or is really absent as a visible disease. In the former cases, it is what I have sometimes called misdirections of the disease, of the  $x$ , or localizations; and its extreme importance may therefore justify some further illustration, even to the hazard of repetition. It is the inflammatory misdirection or localization, as the other cases are the nervous ones: and perhaps, in practice, the errors of confounding the  $w$  of  $x$  with ordinary inflammation, are even greater than those which follow from confounding  $z$  with palsy and apoplexy from other causes.

If I have succeeded in proving that the rheumatism of the face and that of the eye, are neu-

ralgic inflammations, excited essentially by the unknown peculiar state of the nerves here called *y*, while I have also shown that similar ones, as in the local intermitting rheumatism of a limb, can be produced by the condition *x*, and that, in every case, this inflammation is not cured by evacuations, or debilitating means, but on the contrary, aggravated by them, I may safely conclude that there is an inflammation which is not a phlegmasia in the proper sense of that term, and I may be allowed to designate it, as I have done, by the symbol *w*; because, as occurring from mere intermittent, I could not with so much propriety here call it the neuralgic inflammation, as I did formerly, in specific cases.

Now I have proved that in a great number of cases besides these, *w* is a diseased state essentially different from phlegmasia, however resembling it to the eye, or in the symptoms of pain, turgescence of vessels and redness: that difference being evinced to us by the effects of remedies, as I have just said of the others, and that proof being ample; while we can not well command any other equally universal, though it would also appear that there is often an essential difference in the terminations of the visible disorder. And the state *w*, occurring from *x* and from *y*, is also acute, or violent and transitory, or else chronic, or mild and durable: while further, it

has been proved, that whether arising from  $x$  or from  $y$ , from intermittent or from Neuralgia, it is, when chronic, always aggravated by debilitating remedies and cured by the reverse; just as it also is when acute. Or, in this latter mode, when it occurs in an external part that we can see, as in the eye, however acute it may be, or however energetic both itself and the febrile state, or the  $x$  to which it appertains may appear, it is, similarly and equally, aggravated or cured, by the same relative practices; being, in this case also, an unquestionable  $w$ , and not a phlegmasia, however resembling one.

The great question remains: whether we ought not to form the same conclusion as to every inflammatory affection occurring under  $x$ , and under all conditions of that, acute as well as chronic; even when these are internal and invisible, characterized therefore by pain alone, or by such other well-known symptoms as it is unnecessary to enumerate. Thus, if this analogy and this reasoning be allowed as valid, the gastro-enteritis, in all its forms, of French phlegm, will be  $w$ , not phlegmasia; just as I have already suggested that it ought to be considered an effect, not a cause of marsh fever, as it is supposed by that system. The same reasoning will also apply to the inflammations of the brain, the pleura, the lungs, the bronchial membrane, and so forth,

and even, probably, to the acute hepatitis of India: or these will be all *w*, not phlegmasia, or conditions of inflammation resembling that of the neuralgic ophthalmia, or, if this term be preferred, rheumatic inflammations.

How important this view is, as to the practice, I need not now suggest; since on its truth or falsehood must the balance of this hang, for good or evil. And if it is supported by the analogies already pointed out and the various views formerly stated at length, so is it borne out, I need scarcely say, by numerous observations on actual past practice in various hands, and if I mistake not, by the treatment of the hepatitis in India, founded on ample experience and against theory; the theory of phlegmasia.

This is an argument on which I already laid stress in the case of the ophthalmia, and on a comparison of Wardrop's practice, derived from experience, against the ordinary theory, and practice also, with my own, deduced from theory. And while I cannot help regarding it, as in all philosophical proceedings, to be a weighty argument, I need not remind the reader of the innumerable instances in the inflammatory marsh fevers, where the practice of acute and experienced physicians has thus, and in the same manner, against supposed analogy or theory, and practice also, deviated from the received usages



and opinions ; adopting that which I should, in the same cases, have adopted from my theory. I had occasion to point out these facts formerly in several instances ; and very particularly to show, how, even the French physicians, while in the act of declaring the existence of inflammation of the stomach and bowels as the very cause of fever, had pronounced in favour of such a practice as my theory directs : proving the presence of *w*, where they decide, in words, on that of phlegmasia.

Nor would it be difficult to point out many other facts respecting all the inflammations occurring under *x*, as under *y*, in support of the same views ; among which none are more remarkable than their cessation and reproduction, often strictly periodical, in the highly severe epidemic intermittent of hot climates possessing inflammatory symptoms of various kinds : a fact never occurring in proper and simple phlegmasia, if we except gout perhaps, and ranking these with that ophthalmia which I have shown to be not a phlegmasia but a *w*. But I will not dwell on these further proofs, as every physician can now add them for himself ; though I ought also to point out many appearances on dissection ; and among others, as a very remarkable fact, the frequent want or absence of the traces of an inflammation which must have existed, and often, not long before death.

On that point however let me remark, what is of great importance as to the purity of this evidence for opinions, and for opinions, themselves most important when erroneous ; and it is, that inflammation is frequently said to have been present on dissection, when that is not the fact. This is but a branch in a wide mass of error in the same proceedings, and particularly as to effusions, and as to the state of the brain ; errors reflecting high discredit on anatomists, from their frequency, and from the pernicious opinions to which they have given rise, or which they have confirmed. The appearances, so often mistaken for inflammation, as well as for living effusion, are appearances which may occur after death, and do so occur : often sufficiently deceptive, it cannot be denied, and yet, I believe, always to be distinguished by a degree of care not often bestowed on an investigation too generally conducted in a careless manner, or conducted by persons willing to find what they think they have found, or even, under prejudice and system, concurring to their own errors.

I will now terminate this particular abstract : suggesting only, that if what I have attempted to prove shall be admitted or established, it would be most useful to substitute some term for the symbol *w*, and to discard the words phlegmasia and inflammation in these cases: above all, the

latter, since it is most certain that as long as it shall continue to be thus misapplied, no reasoning nor experience will succeed in establishing a better practice among the multitude, guided as it ever is and will be, by terms, habits, and associations.

Yet as a species of further corollary, I ought to enforce a suggestion which seems especially to demand attention, because of its great importance as it relates to the practice in fevers of this nature, and not improbably indeed in fevers, from whatever cause.

It is proved that *x* can produce inflammation, through a modified *y*, or otherwise ; that such a disease is aggravated by the treatment of common active inflammation, and that the means of cure must be directed to *x*. Now the intermittent, and the remittent, are often attended, among other inflammations, by such or similar affections of the brain, particularly, though these last are often also suspected where they probably do not exist. The important question is, whether these are not always of the same class of inflammations, *w* inflammations produced by *x* ; while I cannot help expecting that when the present fashion of considering the great mass of inflammatory affections to be of the same nature as those, the ordinary ones, of the pleura and bowels, or true phlegmasiæ, has subsided, or when the habit of viewing inflammation, as of one character only,

shall be calmly reviewed together with what has been stated in these pages, physicians will find it necessary to review their practice in the cases to which I allude, and in these very particularly. And before I terminate this branch of the present general view, let me make one remark, which ought to have been more urged in the first volume than it was. This relates to what is popularly called a *Coup de Soleil*. How often the action of the sun on the head may produce real inflammation of the brain, or true phrenitis, I cannot, for want of the requisite experience in hot climates, decide; yet this I can say without hesitation, that out of numerous carefully reported histories of that supposed disease, I have found none which was not, simply, the remittent fever of those climates, excited by the ordinary causes; while a casual exposure to a high sun, or the mere popular opinion and theory, had been the ground-work of the false judgment. I need not again remark how symptoms may appear to \*justify that, nor how important the truth is as it relates to the practice.

To return to pure intermittent, for the purpose of examining the condition  $x$ . If what I have said tends to prove that this disease is an original derangement of the nervous system at large, or possibly of the brain alone, that it is a state  $x$  of that system, this is confirmed, in the

mode of dilemma, by the very fact of its connection, of the very singular connection which I have shown, with the state  $y$ ; as we can conceive no other mode of influence which can thus be exerted on a distant nerve. This view is further aided by the very singular influence which intermittent exerts on the nervous system at large, and on nerves individually, independently of the state  $y$ , or of the inflammation which is dependent on it. As to the general nervous symptoms, the state of the mind, and so forth, I need only recall them to the reader's memory, while I must dwell somewhat more particularly on those of a more active and permanent character.

These are the paralytic consequences. I surely need not say that a nerve may lose its power, partially or generally, from a mere local action, entirely independent of any affection of the circulation, or even of the brain; since this is a common consequence of the application of lead. And thus, poisons and cold act more extensively, even so as to affect the entire system, or the brain. Now this condition of the nerves is, pathologically, as utterly unknown as are the conditions  $x$  and  $y$ , while for that reason, I must distinguish it by the symbol  $z$ .

Supposing the cause Malaria to be applied to the body under certain modifications, under that of great energy probably, the first consequence to

the brain is apoplexy, or what is in reality the correct term, a general palsy; or as I have also shown, it is sometimes a partial palsy. The former is the condition  $z$  in its most extensive form, and when it is perfect, the consequence is death: an event which I have formerly shown to occur in this manner. It is probably analogous to the effect of poisons; and it bears some resemblance to that state which follows concussion, since it is aggravated by the evacuant and debilitating system; so aggravated often, as to terminate in a permanent  $z$ , more or less general, when that would otherwise have been transitory, and extending even to death.

All that we can say of this state is, that it is a loss of power; since, not knowing the cause, we must use the effect as a term; or it may be called, in the usual lax phraseology of physic, a debility of the nervous system, or of a portion of that. And supposing it to cease, or that the apoplexy, or general palsy, undergoes a natural cure, it is often succeeded by the intermittent; or, the state  $z$  terminates in that  $x$ .

Here then is a remarkable connection between  $x$  and  $z$ , or between intermittent and palsy, but it is far from being the whole. I have formerly shown that intermittent produces palsies, in separate nerves, and in every possible gradation of energy, extending even to hemiplegia. Thus it

is a tendency of the state  $x$  to proceed to the state  $z$  by aggravation, as, reversely, an original attack  $z$  subsides into  $x$  by alleviation. Thus, were it aught else than the obscure animal structure and functions which we were examining, we might almost conclude that  $x$  and  $z$  were but different degrees of one affection, or that the radical derangement of the nerves, the proximate cause, was, in both, the same, differing only in degree. And it is here also remarkable, that if the vague term debility be substituted for  $z$ , it is the result of evacuates, of all causes which are supposed to diminish the nervous power, to convert  $x$  into  $z$ ; as if, by aggravating a moderate debility, it converted that into an entire one.

Further, in this case, if a nerve be long affected with the condition  $y$ , this state frequently terminates, in that part, or in all that lies beyond it, in  $z$ ; or an inveterate Neuralgia is gradually converted into a palsy, as far as the influence which we may suppose to be that of its deranged part, extends. And further still, it is the effect of the evacuant system, to determine, aggravate, or accelerate, this effect, as also to render permanent that which would have been transitory. In all these consequences, there is a very striking analogy between the proceedings of intermittent and Neuralgia, or between  $x$  and  $y$ , separately, as related to  $z$ ; confirming still further what has

been said respecting the analogous conditions of the nerves in both cases, or of the dependence, in some manner, of  $y$  upon  $x$ , and of  $z$  upon both. I have stated all this, on account of these analogies and of the singular connection between intermittent and palsy; but if I have used the term debility, it is merely out of convenience, and for illustration; as it would be to adopt a very bad logic, though it is the too common logic of physic, to suppose that any light was to be thrown on an inquiry by using an effect as a cause. Debility of a nerve is palsy, and palsy is an effect; but thus it is that medical reasonings commonly wander round in circles, ever discussing and concluding nothing.

If all these facts bring us back to the same conclusion, viz. that intermittent is a disease radically and essentially seated in the brain or nervous system, it is an opinion supported further by the effect of mental operations in its cure; which however cannot be discussed to any purpose as long as we are entirely ignorant of the nature of the connection between the brain as an organic structure and the mind as a metaphysical entity.

But there are also some other facts which deserve here to be recalled to the reader's recollection: since if they do not produce any very accurate illustrations, they tend to some connections



which further discoveries may render of importance.

I have shown that fatuity, or diminution of the intellectual faculties, and that even mania, are the produce of intermittent, and equally of Neuralgia; though it is here scarcely necessary to distinguish these two cases, if what I have already proved respecting their community is admitted, as it now can scarcely fail to be. And further, that when this would not probably naturally follow, it is caused directly by the evacuant system. Or, that state of  $x$  which, under similar circumstances, might terminate in  $z$ , producing common palsy, resolves itself, or is aggravated, into an affection which may be considered perhaps as a palsy in the brain itself, rather than in the nerves of motion and sensation; or a  $z$  of some, or all, of those parts of the brain which are the organs of the metaphysical mind. Here, fatuity, and also mania, is the produce of some state which, again, may be called a debility, or diminution, of the nervous energy, as it is produced by debilitating causes acting on the previous condition  $x$ ; that debility however being seated in a different portion of the nervous system from what it is in palsy.

Those who are inclined to speculate on the division of the mental functions of the brain, might also, if they pleased, here suppose, that in

the separate production of fatuity and mania, the local affections varied, as well in place and in extent as in intensity, just as they do in palsies of the limbs; thus accounting for these separate and varying effects. And how far the noted hypochondriasis of intermittent, and its delirium, must be connected with these circumstances, it is superfluous to insinuate; since, on that subject, I could but vary terms without adding information. Others also may, if they please, trace such analogies as they can find, (and they are tolerably obvious,) between these mental affections and their causes, in this case, and those instances of fatuity, mania, or whatever else of an analogous nature, which are produced by various causes, called debilitating; as they may also speculate respecting the evil effects of remedies of this character in ordinary mania arising from causes yet unknown to us.

I might indeed pursue the whole subject much further; since, according to the usual manner of medical discussions, there is here matter for a treatise; but having drawn all the inferences which the facts seem to warrant, as far as they are connected with the case which I have undertaken to illustrate, I gladly quit it; leaving it to those who may find more pleasure, or fancy more advantages, than myself, in speculation and phraseology. Whether dissection and experiment,

investigations anatomical and physiological, will ever assign the values of  $x$ ,  $y$ , and  $z$ , or discover what the condition of the brain and the nerves is in intermittent, in Neuralgia, and in palsy, I cannot foresee, far as we are at present from even the most superficial knowledge of those organs and their functions, beyond their mere distribution and forms; but even without this, without even the slightest conjecture respecting the proximate cause, the preceding investigation will not be useless.

There is however yet one remark that I must make, or rather renew in a condensed form, in this place, respecting the condition  $z$ , in the nerves; or that derangement which is the cause of palsy. It may become important as far as the practice in this disease, from whatever cause arising, is concerned. It has been shown that this state may occur in a single nerve, or in a greater number, to the extent of paraplegia or hemiplegia; and, further, that these conditions may extend so much wider as to affect the brain, producing epilepsy, producing fatuity more or less perfect, and producing mania. It has also been shown that entire apoplexy, or rather, universal, if temporary palsy, may occur from causes of the same nature, or under the same circumstances; as also that epilepsy, fatuity in various degrees, and mania, may be produced, in these circum-

stances and from these causes, without accompanying palsy. That is, the condition  $z$  may occur in one nerve of sensation or of motion, or of both, or in a greater number, to the extent of one half of these; or else affecting these, it may also involve the brain as far as this is the organ of mind; or lastly, it may occur in the brain alone where it is the organ of the mind, affecting its powers or faculties generally, by reduction of their energy, or partially, by destroying the usual and sound balance of those powers.

Now, in every one of these cases, we trace an intimate connection between the condition  $z$ , and that condition  $x$ , or between all these enumerated disorders and the condition productive of intermittent fever; further proving that whatever the condition  $y$ , or the derangement of one nerve, can effect by aggravation or consequence, is also produced by  $x$  as to any or all the nerves, or the brain itself. But it is also proved that every one of these disorders is produced without any previous necessary affection of the circulating system, without any derangement of the circulation as that affects the head, and by the direct action of a cause productive of intermittent fever, namely, Malaria, and also by mere cold, if, as to some of the effects, more rarely; sometimes without the intervention of that disease, most com-

monly through it, and by aggravation or consequence. And further, it is most amply proved that while intermittent fever marks, in numerous ways, its connection with a state of the nervous system or the body, which is commonly expressed by the term debility, it is the effect of blood-letting especially, and of all other causes of debility generally, to induce the state  $z$ , or to aggravate it, or to convert  $x$  into  $z$ , in other words, to bring on palsy, fatuity, and so forth, by acting in co-operation with intermittent fever.

If it be therefore the effect of blood-letting, as it is supposed, to diminish the nervous power or energy, it is, in the first place probable, that such diminution is an essential part of the disease  $z$ , while the other conclusion is even more important, in as much as it is a practical one. It regards the extreme hazard, in the first place, of adopting the evacuant system in palsies, supposing their causes to be unknown, or it not having been ascertained that there is pressure on the brain, from previous apoplexy; still further, the more than hazard, the certainty, of injury or destruction, whenever the causes of palsy are those already stated: while wherever palsy is a simple original disease, without previous apoplexy, the further probability is, that this state always arises from the condition  $z$  in the nerves,

however induced, and that nothing but evil can arise from the evacuant system.

Nor is the affection of the brain or intellect any proof, in these cases, that this organ is diseased in consequence of a wrong action in the circulating system, requiring blood-letting; since that effect equally takes place in the palsy of intermittent fever, or in the  $z$  of  $x$ , as it does, notably, from narcotic poisons and other causes acting immediately and solely on the nerves themselves. The general caution, if no more can be remembered, should be this; namely, to consider the nerves as organs of prime, fundamental, importance, capable of diseases of their own, original, and utterly independent of the circulating system; and to recollect further, that as far as they are known to suffer original disease, that disease is  $x$ ,  $y$ , or  $z$ , intimately connected; the last being an aggravated state of the two first, and each of these separately, or any two or more of them united, being a condition which is invariably aggravated, and often produced, by loss of blood; or, generally, by debilitating remedies: in brief, that as far, hitherto, as we can prove that the nervous system or a nerve is originally diseased, that disease is a state to which the system of evacuation and debility is injurious or ruinous.

I must not however be understood to say that the nerves are not, or cannot be, subject to other

diseases, or even to one the very reverse, and demanding the very remedies which I here condemn. On the contrary, it is highly probable that the fact is so; and that increase of power or energy in nerves, or in the entire system, is actually a leading cause of diseases, requiring the opposite remedies. If it shall ever hereafter be proved that this system, or its separate portions, can in reality undergo a primary diseased condition the reverse of that which I have here been attempting to demonstrate, we may thus acquire a new mode of viewing a great portion of the diseases of the system: though it is plain that until we shall arrive at a knowledge of the nature of that condition, or the true proximate cause, we are still a long way from a just theory of physic; even should a view thus broad and vague not be without its value in practice, as forming a species of classification for use. It is easy to retort that such a view is only another mode of expressing a certain well-known general medical theory: but I trust that the connections here traced as to one portion of it, and indeed the entire discussion, are of a nature to rescue it from this censure, since they involve facts and are not mere words; words to which even the inventor certainly attached no definite meaning, and which no one, as far as I know, has ever attempted to explain.

A considerable number of phenomena belonging to disease, and belonging to different diseases, belonging also to diseases that have been considered of different and discordant characters, and to arise from separate exciting causes, and also to depend on different and often opposed proximate causes or conditions, have been collected, displayed, and balanced. Throughout these there has been traced, however unexpectedly to physicians, one great and general exciting cause, while some other such causes have been inferred, or admitted under want of proof, and for the whole equally. All these diseases have been shown to pass into each other, to alternate with each other, or apparently to produce and yield to each other. All of them have been proved to be attended by a diminution of nervous power, from their phenomena, or effects : and in this there is a process of enlargement or extension, from a minute part to the whole, as there has also been shown a climax, from simple debility, through various analogous and increasing affections of the nervous system, upwards to Death. In all, the application of powers which we know to be debilitating ones, aggravates, and tends to carry them, locally, from a part through the whole, as also to extend them, in point of injurious power, through the Climax to its ultimate limit. And in all, the reverse powers are remedies. The conclusion



follows: a diminution of nervous energy or power, the cause of disease is established. That this leading cause further produces *w*, or inflammation which is not phlegmasia, has also been proved: though here the greater obscurity lies, because an effect, similar, to all our senses, is produced by a condition which must be of an opposed nature, as far as we can judge from the effects of remedies.

I do not pretend to inquire what that reverse state is, not even to say that there is such a reverse condition of the nervous power, and that it is the cause of this inflammation, or even a leading cause of disease. The whole is left for the future inquiries of physic; as it is left to inquire what further fundamental or proximate causes of disease there may be. But what I have here said in this summing up, will at least show that the theory, as far as it has ventured to go, is not an *a priori* hypothesis, and that it was not derived from a term once in vogue; but that it is a deduction, be it wrong or right, attained in a very different way; gradually brought out, through the legitimate road of facts, and by attempting to trace those facts to the nervous system. My line of investigation has however led me to examine that one condition only, its want of energy or its debility: and it is in attempting to prove that the loss of obvious power was the loss of concealed

or unknown causes of power, and that, to diminish this still further, was injurious, that I have come to a conclusion which is, however, but a suggestion, and offered as such ; open to any evidence and argument that can be opposed to it ; while, considering nothing worthy of pursuit but Truth, I am indifferent whence or from whom that shall come.

There is yet a circumstance, however, if I am not much mistaken, connected with this subject, which I cannot pass without notice, as it seems to me to present some illustration, however slender, of the condition of the nerves in these cases ; possibly to give ground to some conjectures, though vague enough, as to the nature of their disordered action. I must regret that the observations to which I have alluded are confined ; but had they even been less numerous, it would have been my duty to point out the fact, as a subject of future inquiry to those who may have the means of examination into what, at the very least, is an object of physiological curiosity.

It is familiar to every one, that by pressing on the course of a nerve, the parts which it supplies are benumbed ; the sensibility is diminished for a time, and the power of the muscles weakened or entirely suspended. It would be, as it has been, a natural conclusion, that they did transmit a fluid, like blood-vessels, and that its flow had

been thus interrupted ; but unfortunately this supposition is not borne out by any other facts, as they are not tubes, and do not contain a fluid, as far as we can discover. If the pressure has been slight, the power is soon recovered, yet not without an effort productive of very well known painful sensations : if very considerable or long continued, it has occasionally happened that a palsy has been produced, of considerable duration, and, in some cases, permanent.

Whatever be the central force in this case, we may at least conclude without hazard, that there is such a force, and that it is by means of its action above the deranged conductor, that the temporary obstruction is overcome. And thus also we might infer *a priori*, that the facility with which that is overcome and the power restored, will, in any case, and supposing the quantity of injury or obstruction given, depend on the power or activity of that central force, or in a similar energy in the conductor itself, or on both united. This, it must be admitted, is but vague language, yet it is the best that we can command in the present state of our knowledge of this obscure subject, the nervous power and system : and still, vague as it is, while I must use it in drawing the comparison which I have here in view, it is a general expression which may hereafter become of some importance, like the alge-

braic symbols here adopted, when the value of those symbols shall be assigned; if indeed that shall ever happen.

Now the fact in question is this; that in subjects, or patients where the nervous system has suffered severely from the persistence or repetition of long continued intermittents, a slender or moderate pressure on any of the usually accessible nerves, or on those most likely, in our common actions, to suffer this obstruction, produces the numbness or temporary paralysis in question, with a facility unknown to those whose nervous system is in a sound state, or has not been thus affected; and also, that in such subjects, from any given pressure, the ensuing numbness is much more severe and durable than in a healthy person. Or, to state the fact in the general terms just enunciated, the power of the central force, or possibly of the conductor itself, or of both united, is affected in a subject whose nervous system has been subjected to long-continued intermittent; or it acts with less energy in removing such injury, or in restoring, (if I may adopt a term which I use as a metaphorical one,) the circulation through the obstructed vessels. It is, to use this illustration again, as if we were to compare the efforts of the heart in a vigorous and in a debilitated subject, towards the restoration of the

natural heat in a chilled limb, or the recalling of life after fainting.

As to the fact itself, it is a natural objection that it cannot be very easy to observe ; nor should I have ventured to state it, had it not often come before me, and, in some cases, in a very marked manner ; while from having forced itself on my observation as a naked and a mere fact, long before I had thought of associating it with any of the analogous ones which I have detailed in this essay, or of referring these diseases to a pure affection of the nervous system, I feel the more confidence in its truth. It was unbiassed by any previous views or reasonings, and was not recollected for use until long after the opinions which prevail throughout this essay had been arranged, and the very essay itself completed. And while I have observed it in various degrees in different subjects, the patients themselves having pointed it out as an object of complaint, and without previous suggestion, I may also name one case of a severe chronic intermittent, in which this tendency, or this debility of the nervous energy, as I may, without proposing any hypothesis consider it, was so great and so extensive that the patient could scarcely discover any sitting posture without suffering from it ; while for many weeks during his confinement to bed, he could on

avoid the hazard, or rather the certainty, of this accident in his legs and arms, but more particularly in the latter, by lying and sleeping on his back, with all his limbs extended widely. And in a similar case, there is a patient now before me, a long sufferer from relapsing intermittents, who, though long since freed from that disease, is unable to lie on his sides, or never, at least, without some peculiar contrivances in the arrangement of his bed, from the certainty of producing the numbness of the arm beneath, even where the actual pressure seems nothing, and in positions where a healthy person would suffer no inconvenience. Similarly, in another such patient, whose occupation leads to the necessary use of scissors, it requires great care to avoid the pressure of the bow on the nerves of the fingers employed; a casual and careless effort of this kind having frequently produced a tingling and numbness at the extremity of the injured member, not subsiding for many weeks after.

If this consequence occurs, during or after intermittents where no particular local affection or tendency has existed, it is probably much more frequent, and certainly much more easy to observe, in the neuralgic cases. In many instances of this nature, as well after the entire cure of the disease as during its existence, I have found that the deranged nerve continued thus enfeebled, if

I may use this term, and even through its whole accessible extent ; though, as is the case in this disorder, the pained part had been very minute, and situated also at its remote extremity. Thus for example, where the Neuralgia is seated in a finger or has formerly existed there, I have found, that, even for many years after a complete cure, a slight pressure on the trunks of the nerves, even as high as the armpit, was sufficient to benumb the limb ; an effect which, from such a cause, would not have taken place in a healthy subject.

As I commenced by remarking, therefore, it would seem as if in the intermittent, under any of its modes, whether general or local, the nervous energy was diminished ; or that if we conceive the power of the brain as to sensation and effort, to resemble that of the heart as to circulation, it was an effect, or a cause—a condition is the safer term to use—in this disease, that the vigour of the central force or original power should be diminished ; or possibly that the power of the conductors alone, if indeed they are merely conductors, should be enfeebled ; though we may equally suppose that both circumstances are united and coexistent. The facts that I have related seem to offer a species of proof on this point, which may be considered mechanical, or viewed as experimental : as if we could take possession of a single nerve, and by a

regulated application of compressing force, ascertain the strength of the resistance or of the opposed action in surmounting opposition.

I need scarcely now suggest how this view of facts connects itself with the condition of actual palsy following or accompanying intermittent, or of similar paralytic affections following locally the local affections of Neuralgia. This condition is the entire or completed loss of the nervous or central energy as to the part affected, or else of the conducting, or perhaps of the active and delegated power in the nerve itself; since we know not yet what the relative or actual powers of either are, or whether, or how far, the nerves act originally by powers of their own, or merely dispense or circulate a force generated in a central and remote part. In this state of things we must conceive that the loss of power originating in the cause of the disease is complete, or approaches to that state; or it is the actual condition  $x$ ; in the case of numbness produced by a pressure slighter than that which would act in a healthy subject, we must suppose that there is merely a moderate state of  $x$ , or a condition approximating to it; a diminution of energy which a slight addition of debilitating or injurious force is capable of converting into a perfect  $x$ .

Every thing in short confirms the general theory here laid down, that the state of the ner-



vous system in intermittent, or in the whole class of diseases produced by Malaria, is one of diminished power; whether that loss of energy be the direct cause, and the sole one, of these diseases or not, or whether it is only an accessary effect, the cause of other derangement, and the proximate one of palsy. But where every thing confirms this view of the enfeebled state of that power, not only in these diseases but after them, we derive from it the conclusion, not less derived from practice, thus reaching the same point by two separate roads, that it ought to be our business to avoid all causes or actions which may be supposed to act in a similar manner on the nervous system, as far as we can ascertain or conjecture what those are, and further exert ourselves, directly, in making use of all those means which may be supposed or have been found to add strength to its energies. What these are, on both sides, for good and evil, I need not repeat; though I may be allowed to remark, that by whatever road this subject has been here examined, whether through a general, if indefinite, theory derived from different sets of phenomena; or through practical experiments, or through consequences, and the effects of medicine, the same conclusions invariably follow; all agreeing in the hazard or injury which flows from proceedings that induce or aggravate debility.

I ought not, I presume, to terminate this chapter without inquiring into the cause of the intermittent character of these diseases, as well as of their very mysterious submission to the law of twelve hours already noticed. I fear that both are truly mysteries, and so separated from all analogies of any real value, that it is thoroughly fruitless, almost to bestow a thought on the subject. Habit is a term that has been used, and it explains just what other vague terms always do. The revolution belonging to sleep has been named as an analogy; but I truly cannot see how it bears on the question, as long as it cannot explain the recurrence of tertian and quartan. We can scarcely conjecture what the nature of the mere intermission and exacerbation can be, independently of all periods; how a permanent disease can be so interrupted, how a derangement of such exceeding violence as a severe fit of intermittent or Neuralgia can subside and leave the body in perfect health; still less, perhaps, believe that this is but a succession of diseases, and that the apparent health is real, or that the state *x* is not a permanent derangement of the nervous system.

I willingly leave to others what appears to me a profundity of darkness; or rather I leave to posterity what I hope posterity will discover, what at least, it will pursue, and through the

road of philosophy, not words. Yet there is another doubt to be stated as to the periods of the compound intermittents, while I scarcely know what opinions have been formed respecting it, or whether we can dare to hazard one. I have already stated the forms of the double tertian, and need not repeat how the disease is distinguished from the quotidian; though I may remind the reader of the singular cases where one paroxysm is a common intermittent and the other a mere Neuralgia. The question is, whether this is one disease, or whether there are two distinct intermittents in the same person, acquired at different times, and proceeding conjointly; and the same question may be asked as to the complications of type. I know not if any one is prepared to answer it; and if I fancy that I have traced the distinct origin of two several intermittents, from two distinct exposures to Malaria, in one person, at different and even distant times, afterwards proceeding conjointly as a double type, I cannot pretend to have convinced myself of the fact, and am far less desirous of attempting to convince others. And if, on the same ground, I have been familiar with one case, including two double quotidians, or a type where, while the first quotidian, of each day was different from the succeeding, and while the two quotidians of the following were also different

from each other and from both the preceding, and while I further knew that this patient commenced with a single quotidian and gradually accumulated all the others, including among them a Neuralgia, I am ready to believe whatever shall hereafter be determined on this subject; still looking to posterity, for the complete elucidation of a set of diseases, or of a disease, which I have but sketched, and very imperfectly; while I demand the indulgence which may fairly be claimed for a first attempt to extricate a long train of difficulties from their former confusion, and from the prejudices or ignorance under which they have hitherto been contemplated.

Nor do I despair of posterity, nor that physic will yet, at some future day, become a far other science than it is; if much should still remain unattainable, to prevent it from ranking among the accurate sciences. It may be a just enough censure which ridicules its past philosophy or smiles at its present pretensions, equalled only by its imperfections. But to prophesy that this is to be its continuous and eternal fate, is as little prudent as it argues want of reflection. We have no reason to be surprised at the little progress which it made for centuries, when we consider what those centuries were, and examine what then was the state of philosophy, and the methods of pursuing science at large.

Not to enter on an examination of the history of the sciences, or of the progress of the human mind from a not very distant period to our own day, it must be evident to every one who has at all considered this subject, that, if some time has passed since the true path of philosophy was pointed out, it long remained an almost untrodden one, and that a very few years have witnessed greater strides taken, and more solid steps assured, than almost a whole preceding century could have numbered. The natural history of the human body in health and disease, we may admit, is as yet almost nothing in real value: it wants even the skeleton on which a science could be ingrafted: it possesses hardly a fundamental step to that end. But surely a subject so deeply interesting cannot for ever be neglected; it will even draw the attention of cultivators, from the mere necessity of action, and as other subjects shall approach to exhaustion or lose the interest of novelty. It will attract the attention of genius striving to open for itself new paths to fame, and, in truth, it is, even now, attracting new talent and new industry.

And the success will be more rapid and certain than it could ever yet have been, because of the increased attention bestowed on the accurate sciences, or rather, on all the sciences. Independently of all the aids which it must receive

from increase of knowledge and accuracy in those, since no science can stand on its own independent investigations or its own separate basis, it promises to be pursued by minds, not only informed in those sciences, in science at large, but trained in the habits of philosophical investigation and in the sound logic of things. This is a philosophy which will not be cheated by the empty phraseology of physic, but which will define its terms and adhere to them, will cease to be satisfied with words and will demand ideas, will search for evidence and compare analogies, will form solid inductions, and re-extend its generalizations backwards to new inquiries and new facts.

These are the minds to which physic must look; and it is very far indeed, I hope, from being wanting in them, if, as yet, their labours are diverted by other subjects; prejudiced, too often, it may be, respecting what has been too long regarded as hopeless, while it is now too much also avoided, or excluded, as professional. Professional, it may be; but assuredly it is a science of as universal concernment as any which philosophy is now cultivating; as deeply interesting to every man, it will not be doubted, as chemistry, astronomy, or mechanics; matter of the most intimate personal interest, as it is of rational curiosity. But to throw it back as a

duty or a right into the hands of that profession to which it is a trade, will not prove the road to its effectual cultivation: while it is an unfortunate truth, on the contrary, but too well known to every candid and educated physician, that no readier means of obstructing its progress as a science could well be invented; as this has already operated, and daily operates, in forming obstacles to its progress.

The utmost candour and mildness of judgment cannot deny that such is the fact, and that it cannot be otherwise. To thousands, to the vast majority, it is a mere trade, followed as a routine; and, to not one among thousands, is it an object of science, to no one perhaps, of merely scientific pursuit. And while this vast majority does nothing towards its improvement, the bad effects are not merely negative; as the mystery and the error are fortified by the sanction of those thousands, and as those who, from education, from acquaintance with general science and habits of accurate investigation, would be competent to the inquiries under discussion, are excluded from the means of inquiry. How very few persons of the requisite education there are, engaged in physic itself, compared to the multitude, is too well known, to those at least who are capable of the needful discernment: while, by a singular perversion of reasoning, it is the settled prejudice of

the public, to reject, as physicians, those who have given the greatest proofs of possessing extensive general knowledge and powerful minds ; thus depriving them of the means of investigation, with consequences to themselves, as to the science, which must be too obvious to name, and which that science must deplore.

But it would be too easy to prolong these remarks beyond due bounds; and I must therefore conclude; adding to a mere wish as to the fact itself, a wish to believe that the day is not very far distant, when the science of physic will become a sharer in that philosophical attention which it has scarcely or scantily yet received, from minds competent to pursue it as a science, and anxious as competent: expressing my further hope that, at some future day, the art of healing will become an art in the hands of philosophers, and not the trade of empirics ; that while philosophy is labouring to inspire its principles into every artizan, this will not be the only department which it is content to view as a mechanical art, to be conducted mechanically, by artizans. And that it is thus viewed by the entire public, that it is considered, even by the educated public, by what are called rank and talents, universally, as a mere art and a mystery, and not a branch of science, is sufficiently proved, not merely by the facts, that neither abilities nor



education are judged necessary for those who practise physic, but that every one considers himself competent to conduct and to understand it; that equal value, or often greater, is attached to the trader in secrets, who does not even pretend to medical knowledge, to him who, often, it is well known, can scarcely read or write, to the utterly ignorant and base, to the unseen and unknown, and even to the long dead and buried empiric, who cures diseases which he has not examined, and patients whom he never saw and can never see, by remedies of which he knows nothing; and that the stamped box or bottle can supersede all knowledge and all examination of the patient or his disease.

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I have fully stated in the course of this essay, the reasons which compelled me to adopt an order (I should call it a disorder), in treating of the diseases which it includes, of which I did not approve: and I then expressed a hope that I might be able to sketch the form of some better arrangement. I have considered how this could be done, yet with not much satisfaction from any attempt that I have been able to make. The subject is both intricate and deficient: the boundaries of what may be considered diseases and what may be viewed as mere symptoms, are very indefinite; and while, further, many of them run

into each other so as to defy a correct division, there are numerous probable blanks which, for want of sufficient experience, I cannot supply. But almost any arrangement is preferable to none, or to that disorder under which I have already considered the diseases in question; and I shall therefore, without further apology, submit the following tabular view, as a basis or sketch for future amendment or alteration, should the subject, as I have treated it, meet with that approbation from the profession, of which my hopes are indeed but slender.

## TABULAR VIEW

*Of the Diseases appertaining to Marsh Fever and Neuralgia.*

## MARSH FEVER.

CONTINUOUS }  
REMITTENT }

Ephmera }  
Synocha }  
Synochus }

SINGLE OR TERMINATING

CHRONIC OR RELAPSING

ANOMALOUS AND SIMULATING : *vide* Intermittent.

## INTERMITTENT

QUOTIDIAN

Double

TERTIAN

Double

QUARTAN

Double

Triple

QUINTAN, &c.

SINGLE OR TERMINATING

CHRONIC OR RELAPSING

ANOMALOUS AND SIMULATING. With local symptoms often more conspicuous than febrile ones; and chiefly so when chronic. Often deceptive in these cases, or mistaken for original or separate diseases.

Terms from  
Authorities.

## PARALYTIC.

carotica {	Apoplexy—primary: repeated
soporosa {	Lethargy ——— periodical
comatosa	Coma ——— periodical
	Universal palsy—permanent
Hemiplegica	Hemiplegia
	Paraplegia } permanent: periodical
	Local palsies }

## SPASMODIC.

Epileptica }	Epilepsy }	irregular · periodical
Cataleptica	Convulsions }	periodical
Hysterica	Catalepsy	periodical
Pertussis	Hysteria	irregular: periodical
Asthmatica	Spasmodic cough	: periodical
Stranguriosa	Asthma, Dyspnoea	: periodical
	Irritability of bladder and strangury	: periodical
	Palpitation of heart	

NERVOUS MISCELLANEOUS.

mens. Amentia quartana .....	Mania	} permanent . periodical
lypochondriaca .....	Fatuity	
	Hypochondriasis, permanent :	periodical
	Vertigo, periodical :	transitory
cephalalgica.....	Headachs, irregular :	periodical
	Dyspepsia, irregular :	periodical
	Deafness, periodical	
	Amaurosis, periodical :	durable
	Nervous disorders :	undefinable
	Chlorosis	
torbus Pannonicus .....	Debility	
	Atrophy .	
metica.....	Vomiting, periodical ; chronic :	acute irregular
	Diarrhoea :	periodical : permanent
	Menorrhagia, Amenorrhœa, Dysmenorrhœa	
	Diabetes	

INFLAMMATORY.

pleuritis .....	Pleurisy, permanent :	periodical
	Hepatitis ?	
	Rheumatism	
	general	} permanent : periodical
	local	
	acute	
	chronic	
arthritica.....	of joints	
	of intercostal muscles ; false pleurisy	
nephralgia .....	Nephralgia	
	Catarrh :	permanent acute . periodical, chronic
sciatica .....	Sciatica, periodical :	permanent. ? Neuralgia
	Phthisis	
	Hectic, false	
rticata .....	unknown to me, and not intelligible, or doubtful	

DYSENTERY,

Acute  
Chronic.

CHOLERA,

Indian Cholera ; if different  
Common Cholera.

SUPPLEMENT.

ENDEMICS SAID TO BE PRODUCED BY MALARIA.

(MONFALCON AND OTHERS.)

Scurvy  
Pellagra  
Bronchoccle  
Ulcers  
Rickets  
Cretinage  
Hernia  
Varix  
Elephantiasis  
Asthma  
Angina  
Œdema of the lungs  
Visceral obstructions : and dropsy, as consequences  
Scrophula  
Phthisis

## NEURALGIA.

*Intermittent febrile Symptoms marked, obscure, or undiscoverable, or possibly not existing.*

## PAINFUL.

OF ASSIGNABLE NERVES. Pain acute: periodical or irregular.

Spinal Marrow. As yet little known, or observed.

Nerves of face. Tic douloureux, in any part of the head as well as of the face.

Optic nerve.

— Of teeth. Toothach without caries.

\* Sciatic nerve. Sciatica.

Anterior crural, in various parts, with various Neuralgia.

Spermatic nerve.

Radial. In various parts, with various Neuralgia.

— Of fingers.

— Of toes.

&c. &c. &c. Blanks to be filled. records not yet found

OF UNASSIGNABLE NERVES. Pain commonly less acute, or dull, or none: periodical or irregular: very acute however in some cases.

\* Headach

Common, confined to parts, or general.

Intermitting.

Hemicrania.

Clavus.

Wandering or unfixed, toothach; or face-ach.

\* Palpitation of heart. No pain.

Palpitation of aorta. No pain.

Palpitation of cœliac artery?

Stomach pains?

Colic ———?

\* Kidney and ureter. Decided Neuralgia: nephralgic pain.

Bladder and neck. Irritability: strangury; no pain.

Rectum.

Testicle. Acute pain.

Palus.

Cauda equina. Lumbago.

Dr. Alderson ..... Mamma. Acute pain.

Knee. Pain various.

Shin bone. Anterior tibial? considerable pain.

INFLAMMATORY, with neuralgic pains of assignable or unassignable nerves: acute or dull: irregular or periodical.

\* LOCAL RHEUMATISM OF LIMBS.

in muscles.

in joints.

RHEUMATISM OF HEAD.

in face. Rheumatic (inflammatory) headach.

in jaw. Rheumatic toothach.

**Acute.**  
 — suppurating.  
 — Inflammation of Iris.  
**Chronic.**  
**Transferable.**

from wounds or punctures of nerves : any where.  
 — from blood-letting.  
 — from amputation.  
 from blows : any where.  
 from ulcers . any where.  
 — from caries of teeth : carious toothach.  
 from tumours, aneurisms, &c.  
 from corns.

- \* Diabetes : periodical
- Lacrymation : general: occasional, or periodical.
- \_\_\_\_\_Of one eye: false fistula. Periodical: irregular.
- \* Salivation.
- \* Diarrhoea. Uncertain : \_\_\_\_\_tertian :
- \_\_\_\_\_quotidian.
- Semi catarrh. Irregular: periodical.

### GENERAL.

- \* **Mania.** Irregular : periodical : tertian.
- \* **Fatuity.** Permanent : periodical . quotidian.
- \* **Hemiplegia.** tertian.
- \* **Nervous diseases.** Undefinable in variety and number.

**numbness**: any where.  
**tingling**: sensibility: facility of being affected by pressure.

- \* Amaurosis. Permanent: periodical.  
Contraction of Iris. Permanent: periodical.  
Opacity of cornea.  
Cataract?  
Caries of teeth?  
Gum boils and abscesses. Irregular: periodical.

The affections marked with \* have been unavoidably also enumerated under intermittent, since they occur in both; or else the exact character of the disease is, under the present separation, unassignable.

**The End.**

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### ERRATA.

- Page 52, line 17, after place insert a full stop.*
- 54, — 8, *transfer the comma from is to business.*
  - 59, — 3 *from bottom, for perceded read preceded.*
  - 103, — 7 *from bottom, for often read after.*
  - 125, — 13, *for practice read practices.*
  - 126, — 2, *for consistings read consisting.*
  - 213, — 9 *from bottom, after has been insert generally.*
  - 217, — 14, *for ramification read ramifications.*
  - 334, — 1, *for of read to.*
  - 334, — 7, *for that read those.*
  - 465, — *last, after above all insert in.*
  - 466, — 1. *for it read they.*
  - 477, — 3 *from bottom, for to read in.*
  - 490, — 7, *for the read this.*
  - 493, — 17, *for it is read we are.*











